THE RELATIONSHIP BETWEEN CLASSROOM CLIMATE VARIABLES AND STUDENT ACHIEVEMENT

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ABSTRACT

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The purpose of this mixed methods study was to first analyze quantitative data to identify if a relationship existed between classroom climate variables and student achievement. The quantitative data were taken from Progress Book software in a Northwest Ohio school district. Data from Progress Book was chosen to be analyzed because the studied district may use data from Progress Book, namely class grade average, to make decisions regarding the effectiveness of teachers. Additionally, data regarding the use of postings to Progress Book may be used by the studied district to make decisions about technology use in the district.

Next, four teacher participants were chosen from the quantitative data as effective teachers. The four participants were observed and interviewed to ascertain the instructional strategies effective teachers use to engage students learners in their classrooms to increase student achievement and decrease office removals. The use of research-based practices was also explored.

Significant negative correlations of Class Grade Average with Postings on Progress Book, Number of Assignments, and Percent of Students on an IEP were found within the course data. A significant positive correlation between Class Grade Average and Class Size was also found. Within the teacher data set, a significant negative correlation between Class Grade Average and the Percent of Students on an IEP was established. All correlation coefficients were weak and indicate limited practical significance.

The qualitative analysis resulted in the finding that while the quantitative data showed all four participants were effective, some were more effective than others based on the instructional
techniques used within their classrooms. The targeted research-based practices were not observed being consistently used across the classrooms.

There is a need to develop knowledge about what classroom climate variables can impact student achievement. The findings of the current study showed that classroom and school factors such as teacher effectiveness can influence student achievement. The present study reflects the need to consider professional development in the area of research-based instructional practices. In addition, caution should be taken when using one quantitative measure as the sole means of evaluating teacher effectiveness.
DEDICATION

This dissertation is dedicated to my children: Nicky, David, and Michael. May you always strive to achieve to the best of your abilities, reach for the stars, and never be afraid to follow your dreams ~ may you never stop learning.
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CHAPTER I. INTRODUCTION

Background of the Problem

The No Child Left Behind Act (NCLB) was passed into law in 2002; the nation is now at the midway point of its goal of having all students performing at grade level or better by the year 2014. According to the United States Department of Education (USDOE) (2008) 70% of the nation’s schools are making adequate yearly progress, meaning the schools have made substantial progress toward student proficiency in designated subject areas (Carey, 2008). The USDOE (2008) reports 10,676 of the 98,905 schools in the nation are in need of improvement and 2,302 of the schools are in need of total restructuring.

What does this look like in terms of student achievement? Nationally, 29% of all eighth grade students are proficient in reading, and 32% of all eighth grade students are proficient in math (USDOE, 2008). In Ohio, overall student achievement has increased, although there are areas of difference in performance among students in various subgroups (Ohio Department of Education [ODE], 2008a). The focus of the present study is junior high and high school student achievement; as such, the researcher will focus on achievement in those grade levels. The 2004-2005 school year was the first year in which seventh and eighth grade students were given statewide assessments to measure academic performance; students were assessed in math in both the seventh and eighth grade, and in reading in the eighth grade. Students achieved a 58.5% proficiency rate in the seventh grade and a 60.1% proficiency rate in the eighth grade in math, and a 78.9% proficiency rate in the eighth grade in reading statewide (ODE, 2005).

Data from the Ohio tests are disaggregated into subgroups to be analyzed. The subgroups are: (a) race/ethnicity, (b) disability, (c) English proficiency, (d) economic status, (e) gender, and (f) community schools (charter schools). Looking at the disaggregated data, white students
achieved nearly a 70% proficiency rate on the mathematics test but fewer than 30% of Blacks and only 40% of Hispanics scored at proficient level or above (ODE, 2005). The achievement gap is not as pronounced in reading; the eighth grade white students achieved an 80% proficiency rate, while 57% of Blacks and 62% of Hispanics achieved proficient scores in reading.

The 2004-2005 school year was also the first time tenth graders were required to pass all five sections of the Ohio Graduation Test (OGT) to graduate from high school. Previously, reading and mathematics portions were administered, and in the 2004-2005 school year social studies (citizenship), science, and writing were administered for the first time. Beginning in the tenth grade, students have multiple times to pass the OGT- five during the regularly scheduled school years until graduation - but the students can also take the test during the summer if they desire. On their first attempt in March 2005, 64.6% of the class of 2007 passed all five sections of the OGT. By their senior year, more than 90% had met the graduation requirement (ODE, 2005).

The concern comes when looking at the disparity among subgroups. Whites outperform Blacks and Hispanics on all five tests, sometimes by thirty percentage points (ODE, 2007). There is also a large proficiency gap between students with disabilities and those without disabilities. All students are required to participate in federally mandated testing, regardless of disability (Ohio Administrative Code sec. 3301-13-03). While taking the tests, students with disabilities are allowed accommodations such as extended time, frequent breaks, taking the test in small groups, and oral administration of the test (ODE, 2009). Alternative assessments can also be used to evaluate students with the most severe cognitive disabilities (ODE, 2005). Students with Limited English Proficiency (LEP) are defined as students whose native language is not English.
In the past LEP students have not performed as well on the OGT as non-LEP students (ODE, 2005). A possible explanation for this could be the challenge of understanding and processing information not taught in the student’s native language. In reading, LEP students achieved a proficiency rate of 48.9% while, non-LEP students achieved a proficiency rate of 79.2% (ODE, 2005). Large gaps appear in math and science for this subgroup as well. The economically disadvantaged represent a large and diverse segment of Ohio’s population. This subgroup has not achieved the same level of achievement as students who are not economically disadvantaged. In reading, the economically disadvantaged achieved a proficiency rate of 80% while their non-economically disadvantaged counterparts achieved a 95% proficiency rate; in math, the economically disadvantaged achieved a proficiency rate of 62% while the non-economically disadvantaged achieved an 87% proficiency rate.

Results of the statewide assessments can be used to gauge student learning of academic content, and monitor progress of academic content standards annually as students progress through grade levels. The results of the tests can also serve as guides in professional development implementation. Student performance on the tests has been improving. While this is encouraging, the achievement gap between the highest performing and the lowest performing students is concerning. The need to close the achievement gap has become a priority for minority and low socio-economic students in the United States (Catelli, 2006). Closing the achievement gap has been identified as one of Ohio’s critical goals as well (ODE, 2005). Closing the achievement gap may only be accomplished by a comprehensive approach involving educational, social, and governmental programs working together toward the same goal (Catelli, 2006). Effective teachers are the most critical piece in improving student achievement and closing the achievement gap. The most important difference between the most and least effective
classrooms is the teacher (William, 2007). The single most important influence on student learning is the quality of teaching, yet most schools don’t define what good teaching is (Danielson, 2006). This is a problem because if it is not defined, teachers may not be given the opportunities to improve practices in the classroom, it is the student’s achievement that may be harmed as a result.

Rationale for the Study

A study of teacher classroom practices as they relate to student achievement is important for several reasons. Understanding the reasons why the teacher is important will give insight to professional development planners. While student achievement may be improving, it is not increasing at a high enough rate to meet the NCLB goals in 2014. In addition, the achievement gaps among subgroups continue to be an area that needs to be addressed.

Teachers have been found to be the single most important factor influencing student achievement (Cochran-Smith, 2002; Kaplan & Owings, 2002; Lasley, Siedentop, & Yinger, 2006). The present study will focus on factors which may influence classroom climate, including (a) teacher use of Progress Book, a technology-based tool the teacher can use for communication with students and parents, (b) number of special education students, (c) class size, (d) teacher use of research based best practices, and (e) instructional leadership. Few studies have examined the factors together applying a mixed methods research approach to identify the complex relationships between all of the factors and student achievement.

Identifying such factors contributing to increased student achievement is paramount in this age of accountability. Federal mandates for student achievement through NCLB are not going away; schools are held accountable through statewide assessments of all students. Teachers need to be held to high standards and implement research-based best practices in their
Identifying factors contributing to student achievement is very important. Regarding leadership, the principal indirectly impacts the performance of teachers under his or her leadership as well as the climate and culture of the building (Stewart, 2008).

A study focusing on classroom climate factors as they relate to student achievement is a timely concern considering the urgency and scope of achievement gap crisis in our schools today.

Purpose of the Study

The purpose of the sequential explanatory design mixed methods study was twofold. First, quantitative data was analyzed to identify if a relationship existed between classroom climate variables and student achievement. The quantitative data was taken from Progress Book software in a Northwest Ohio school district. Data from Progress Book was chosen to be analyzed because the studied district may use data from Progress Book, namely class grade average, to make decisions regarding the effectiveness of teachers. Additionally, data regarding the use of postings to Progress Book may be used by the studied district to make decisions about technology use in the district. The variables studied included the following: (a) class size, (b) number of special education students, (c) number of class assignments given per course, (d) number of office referrals given per teacher per course, (e) the overall class grade average, and (f) the number of teacher postings on Progress Book.

Overall class grade average was used in the present study as the researcher’s measure of student achievement. It was be a global measure of student achievement in the teacher’s class, measuring the effectiveness of the classroom practices.

A second purpose of the study was that qualitative data was analyzed to and identify and examine the instructional practices effective teachers use in their classrooms. Interviews and
observations were conducted. The researcher investigated the instructional techniques effective teachers displayed in the engagement of student learners to facilitate student achievement and decrease office referrals. In addition, the researcher investigated how the teachers exhibited his or her effectiveness, specifically investigating the use of best practices in the classroom. Some of the best practices explored were (a) student-centered learning, (b) making connections to prior learning, (c) ensuring contextualized instruction, (d) providing feedback for students, (e) using data-driven instruction, (f) use of graphic organizers, and (g) differentiating instruction for students. The researcher also investigated the perception teachers have of administrators as instructional leaders. Four participants were chosen on a purposive basis from the quantitative data in the junior high school and high school in the Northwest Ohio school district; one from each junior high school and two from the high school.

Research Questions
The following research questions were addressed by this study:

1) To what degree do the following classroom climate variables relate?
   a) Class Grade Average (student achievement)
   b) Number of Postings on Progress Book (homework)
   c) Number of Assignments per course
   d) Class Size
   e) Number of Students on Individual Education Plans (IEPS)
   f) Number of Class Removals per course

2) Does a difference exist in student achievement between the following groups?
   a) High/low Postings on Progress Book (homework)
   b) High/low Number of Course Assignments
c) High/low Number of Class Removals

d) High/low number of Students on an IEP

3) How do effective teachers engage student learners to facilitate student learning and decrease office referrals?

4) What are teachers’ perceptions of the amount of support received from the principal?

Significance of the Study

A major concern in schools is to increase student achievement. One way to do this is to focus on classroom climate variables which will influence student achievement and create the best environment in which to facilitate learning and engage students.

Research suggests that student achievement is related to a complex interaction of several factors; teacher quality is positively related to student achievement (Lasley et al., 2006); teaching style is related to student achievement (Opendakken & Van Damme, 2006); and using research-based best practice teaching strategies has also been shown to increase student achievement (Kaplan & Owings, 2001). Additionally, school factors also interact with the teacher factors to make complex relationships affecting student achievement; class size has continued to be a controversial topic in the research regarding its impact on student achievement (Hattie, 2005); and the leadership of the school also indirectly impacts student achievement (Heck, Larsen, & Marcoulides, 1990). This study employed a process of analyzing classroom climate variables to support student achievement. Understanding classroom climate variables will allow for professional development for teachers to focus on areas to increase student achievement. Furthermore, understanding the importance of teachers and their impact on student performance will help individuals at universities examine teacher preparation programs. Teachers must come
to the profession not only highly qualified but feeling prepared for what they need to do in the classroom.

Definitions of Terms

Relative to this study, definitions to the following terms are provided in order to clarify each in the context of the topic:

*Academic Achievement* - Student performance on state assessments (Cunnigham, 2003). However, for the purpose of the proposed study, overall class average will be the measure of academic achievement used. This term is used interchangeably with student achievement.

*Achievement Gap* - Significant achievement differences between groups of students of different race, gender, and socio-economic status that cannot be explained by cognitive ability (Bainbridge & Lasley, 2002).

*Adequate Yearly Progress* (AYP) The measure by which schools, districts and states are held accountable for student performance under Title I of the No Child Left Behind Act of 2001. It is used to determine whether all students, including individual subgroups of students are making progress toward meeting academic standards (Education Week, 2004).

*Class Grade Average* - For the purpose of the purposed study the overall class grade average is a variable in the study used to measure student achievement globally in the classroom. The overall class average is a number calculated by Progress Book in each teacher’s grade book which averages each student’s class average.

*Class Size* - The number of students in a class, which varies considerably from day to day; and at different times throughout the day because of student mobility, truancy, and absences (Ehrenberg, Brewer, Gamoran, & Williams, 2001).
Classroom Climate - The classroom environment involving the shared perceptions of the students and the teachers (Sinclair & Fraser, 2002).

Contextualized Instruction - Instruction taking the form of “real-world examples or problems that are meaningful to students personally” (Rivet & Krajcik, 2008, p. 80).


Effective Teacher - For the purpose of the proposed study an effective teacher will be defined as a teacher who has a high overall class average and a high number of posted homework assignments.

Highly Qualified Teacher - One who meets the following criteria: (a) the teacher has obtained full state certification (including alternative licensure), or (b) passed the state teaching licensing examination, and holds a license to teach in the state (NCLB, 20 USC § 7801 § 9101 (A)).

Instructional Leadership - Involves the active collaboration of the principal and teachers on curriculum, instruction and assessment; the principal seeks out ideas and expertise for school improvement. The principal and teachers share responsibility for staff development, curricular development, and supervision of instructional tasks (Marks & Printy, 2008).

No Child Left Behind - Federal legislation signed into law in 2002 reauthorizing the Elementary and Secondary Education Act (NCLB, 20 USC § 6301, et seq.).

Office Referrals - For the purpose of the proposed study an office referral is defined as the teacher sending a student to the office for a behavioral problem that he or she felt needed to be handled by the assistant principal or someone other than the teacher.
**Posted Homework Function on Progress Book**- To post homework on Progress Book the teacher needs to add assignments as he or she normally does, then check a dialog box which posts the assignment to the web. In this function, teachers may also post class rules, notes, class reading lists, etc. for students to access outside of class. This function serves as a form of home school communication.

**Progress Book**- An online grade book and home-school communication system (Software-Answers, Inc., 2007).

**Pupil-to-Teacher Ratio**- A global measure of the human resources a school district employs; this number often includes teachers who spend all or part of their work day as administrators, librarians, special education support staff, itinerant teachers, or other roles outside the classroom (Ehrenberg, et al., 2001).

**Research Based Practices**- Strategies, interventions, programs, or curricula that are supported by rigorous substantiation of effectiveness (U. S. Department of Education, 2003).

**School Climate**- The shared beliefs, values, and attitudes that shape interactions between students, teachers, principals, and set the tone of acceptable behavior for the school (Koth, Bradshaw, & Leaf, 2008).

**School Culture**- The unwritten beliefs, values, attitudes, and various forms of interaction among students, teachers, and principals (Stewart, 2008).

**School Milieu**- The physical location of the school (i.e., rural, suburban, or urban) and background characteristics of the population of the school, including the ethnicity, gender, and socioeconomic status of the staff and students (Stewart, 2007).
**Sense of Community**- “a feeling that members have of belonging and being important to each other, and a shared faith that members’ needs will be met by the commitment to be together” (McMillan & Chavis, 1986, p. 9).

**Student Achievement**- Student performance on state assessments (Cunnigham, 2003). However, for the purpose of the proposed study, overall class average will be the measure of academic achievement used. This term is used interchangeably with academic achievement.

**Student-Centered Teaching Style**- The teaching style in which teachers demonstrate active student involvement in subject matter by differentiating activities and using data to guide student learning (Opdenakker & Van Damme, 2006).

**Teacher-Centered Teaching Style**- The teaching style in which teachers demonstrate direct behaviors to increase student compliance and direct student learning; examples may include such teaching strategies as lecturing (Cohen & Amidon, 2008).

**Teacher Use of Posted Homework Function on Progress Book**- For the purpose of the proposed study this variable will be defined as the number of times the teacher has used the function on Progress Book software allowing students and parents to view assignments as homework on-line.

**Teaching Style**- “A complex set of behaviors used by the teacher to establish and maintain classroom conditions that will enable students to achieve instructional objectives and to learn” (Cohen & Amidon, 2008, p. 269).

**Delimitations and Limitations**

The delimitations of this study involved the following. First, participation in the qualitative portion of the study was voluntary and will not represent a random sample of the population. Second, four teachers were studied in depth as a part of the qualitative phase of the
study. Finally, participants were selected from the same school district; findings may not be
generalizable to other school districts.

In the qualitative phase of research, the study is limited by the fact the findings could be
subject to other interpretations per the codes. Quantitatively, researcher error when inputting the
data may be possible; tedious counting of data was necessary during data analysis. While care
was taken to avoid error, mistakes could have occurred during input. Teacher grade inflation or
grading patterns that may vary by teacher or subject are possible limitations to the study as well.
These are teacher variables that are not being measured; there may be outliers in class averages
that may exist. Another limitation of the study includes the fact that no individual level factors
will be analyzed in this study (i.e., student attendance); a more rigorous study would include
factors at the individual, classroom, and school level, but the scope of the present study did not
allow individual factors to be analyzed.

Organization of the Remaining Chapters

The remaining chapters of the study include a Ch II, Literature Review; which will focus
on the teacher’s impact on student achievement, and the school factors effecting student
achievement. The study also includes a Ch III, Methodology; Ch IV, Quantitative Results; Ch V,
Qualitative Results; and Ch VI, Discussion and Conclusions.
CHAPTER II. LITERATURE REVIEW

Introduction

The state of Ohio requires statewide assessments to measure student learning of important academic content. Student achievement at the “proficient” level or higher on the assessments has been increasing steadily over the past several years (Ohio Department of Education [ODE], 2005). However, in the 2006-2007 school year 230 schools were still in academic watch and 182 schools were in academic emergency (ODE, 2007), the two lowest ratings on the Ohio report card. These low ratings are indicative that large numbers of students are not achieving.

Having highly qualified teachers within classrooms is an essential factor to student academic achievement (Cochran-Smith, 2002; Kaplan & Owings, 2002; Lasley et al., 2006, William, 2007). Teachers are most directly positioned to influence student achievement. Teacher quality can be broadly defined, but it has become a legislative issue with the reauthorization of the 2001 Elementary and Secondary Act, No Child Left Behind (NCLB, 2002). Staffing classrooms with highly qualified teachers has been a high priority. In Ohio in the 2006-2007 school year, 96.5% of core courses were taught by teachers who met the federal definition of a highly qualified teacher (ODE, 2007).

Within the classroom, content aside, a number of variables can have a significant effect on student achievement. Class size (Glass & Smith, 1979) and student behavior can impact student achievement. Class size has been widely researched to determine its effect on student achievement (Glass & Smith, 1979; Hattie, 2005; Nye, Hedges, & Konstantopoulos, 2002; Rice, 1999; Vignoles, 1999). Other researchers disagree citing literature that factors other than class size influences student learning (Finn & Achilles, 1999; Hanuchek, 1999). For secondary schools
in the United States, the average student to teacher ratio is 16 (U. S. Department of Education, 2004). In Ohio, the most recent data available is for the 2003-2004 school year which shows the average class size at the secondary level being 23.6 students (U. S. Department of Education, 03-04). While it seems a smaller class size benefits student achievement, research indicates the impact of class size paired with other teacher variables may also play a part in student success; specifically teacher education, teacher quality, and teaching style (Rice, 1999).

Student behavior is also an additional concern in junior high and high school students’ academic achievement (Stewart, 2008). In junior high, students may be experiencing tremendous individual and personal changes which may be the cause of behavioral problems. The transition into high school brings with it many additional problems; suddenly there is a heterogeneous student body, high levels of competition, and for some students, high levels of stress and low self-esteem which in turn could result in low academic achievement and social maladjustment (Reed, & McMillan, 1995).

This literature review will examine the ways in which teacher behaviors in the classroom can affect student achievement. Teacher quality, teaching style, and research-based teaching best practices will be examined in the literature to explore the relationship between teacher behaviors and student achievement. In addition, the literature review will also briefly examine school factors effecting student achievement such as class size, school climate, and leadership roles within the schools.

Teacher Impact on Student Achievement

Highly Qualified Teacher

The Elementary and Secondary Education Act was reauthorized in 2001 and signed into law as No Child Left Behind in 2002 in what can be described as the most comprehensive bill
focusing on education in educational history. The bill has also been described as an effort by President George Bush, both houses of Congress, and concessions by both political parties to re-write the educational policy (Cochran-Smith, 2002a). While the bill increases the role of the federal government in state and local education policy in many capacities, it is the area of teacher quality on which this literature review will focus.

According to the definition set forth in No Child Left Behind (NCLB), a highly qualified teacher (HQT) is one who meets the following criteria: (a) the teacher has obtained full state certification (including alternative licensure), or (b) passed the state teaching licensing examination, and holds a license to teach in the state (20 USC 7801 § 9101 (A)). The bill further breaks down the qualifications of a HQT by their level of experience; if an elementary teacher enters the profession, the teacher must (a) hold a bachelor’s degree, (b) pass a state test in subject knowledge and teaching skills pertinent to the elementary school curriculum (20 USC 7801 § 9101 BIIi). A new middle school or secondary teacher must (a) hold a bachelor’s degree, and (b) pass a state test in each academic area the teacher will be teaching, or (c) successful completion of an academic major, graduation degree, or advanced certification (20 USC 7801 § 9101 (B)).

If teachers are not new to the profession, teachers must go through steps to become highly qualified if they do not fit the above descriptions. The bill states that all teachers must hold a bachelor’s degree (20 USC 7801 § 9101 (C)) but the U. S. Department of Education allows each state to demonstrate a uniform competency in subject matter and teaching skill (Carpenter, 2004; Lewis, 2005; Viadero, 2007).

No Child Left Behind legislation has given each state until the end of the 2006-2007 school year to ensure 100% of their core academic classes were taught by highly qualified teachers. While many states were close; no state met the 100% mark. No states were penalized,
and will not be as long as they are making a good faith effort to have teachers become highly qualified (Viadero, 2007). In the 2006-2007 school year, in Ohio 96.5% of core academic classes were taught by teachers who met the federal definition of a highly qualified HQT (U.S. Department of Education, 2007).

Nationwide in 2008, 95.76% of elementary classes in low poverty areas were taught by HQTs, while 90.42% of elementary classes in high poverty areas were. In 2008, 93.46% of secondary classes in low poverty areas were taught by HQTs, while 90.42% of classes in high poverty areas were (U.S. Department of Education, 2008). Some disparities exist between the qualifications of teachers in high poverty and low poverty schools. Not surprisingly, while NCLB clearly states teachers cannot have state certification waived, nine percent of teachers in high poverty schools are teaching on a waiver (Rotherham & Mead, 2003). Fortunately for those schools, the teachers on waivers do possess a major in their content area or have passed their state exam (Cochran-Smith, 2002a). The current inequities affect the most needy schools, students, and subject areas. The most disadvantaged students need the most qualified teachers, but are the most unlikely to receive them (Rotherham & Mead, 2003).

The idea of highly qualified teachers is a good one, but compliance has not been widespread (Viadero, 2007). Some states have set low expectations for teacher quality, and sometimes it depends on what school in which a teacher teaches in. No Child Left Behind is defining teacher quality legislatively but a consensus on what teacher quality really is, has been hard to find (Lewis, 2005).

A possible problem is that teachers and teacher educators are allowing politicians to decide the criteria for HQT because “most people couldn’t care less about their children’s education; but they are very concerned about their children’s success” (Carpenter, 2004, p.2).
Carpenter (2004) states that the educators have gotten it wrong and misread the public and the politicians have gotten it right; success is of interest to everyone, education is of interest only to the educated.

The question which begs to be asked is what defines teacher quality? If a student is asked about a teacher who is highly qualified, they will most likely tell you that it is the teachers who spend extra time with them and who makes the class content clear and attainable (Lewis, 2005). Conversely, the unqualified teachers are the ones who are boring and don’t connect with them. Students don’t care about educational certificates or years of experience. Anobi (2006) recognizes that as true educators, teachers are always learning; and teachers need to continue to define the meaning of highly qualified, instead of doing as little as possible within the meaning of the law. As teachers, educators need to move from mere competence to excellence in practice.

Teacher education programs are working to ensure graduates are considered highly qualified in the advent of NCLB requirements (Anobi, 2006). However, excellent teachers are not made by graduating from college. Higher education teacher programs must prepare teachers to implement best-practices in an atmosphere of reflective thought on teaching.

Defining teacher quality is a question that resurfaces again in the literature on teacher preparation. Does content knowledge in addition to knowledge about teaching make a difference in student achievement (Kaplan & Owings, 2001)? One group believes quality teachers possess content knowledge and have studied instructional ideas and practices that have increased student achievement, while another group believes teachers just need strong content knowledge. Kaplan and Owings (2001) found disagreement in the literature over whether traditional teacher preparation positively affected student achievement. They found that teachers who learn and practice sound pedagogical practices techniques can affect students’ measured achievements and
also students whose teachers had strong content knowledge and had learned to work with students who came from different cultures or special needs tested higher than one full grade over their peers.

Traditionalist teacher preparation programs could be improved slightly according to Lasley et al. (2006). The pedagogical understandings related to how to teach content and how to understand student understanding are necessary for any highly qualified teacher; and they are being acquired by prospective teacher preparation programs. What is missing is evidence to support that the approaches being advocated are achieving educational goals (Lasley et al., 2006).

A lack of research linking how teachers are prepared and whether this preparation makes a difference in student learning persists. The Ohio Teacher Quality Partnership (TQP) is a series of research studies designed to learn more about the characteristics of effective teachers and identify patterns that enhance student learning. The TQP will also examine the assertion if teaching variables outweigh socioeconomic status in terms of student achievement (Lasley et al., 2006). In the MetLife Survey of the American Teacher (Metropolitan Life Insurance Company, 2006), seven percent of new teachers reported they were not prepared to teach the subject matter they were hired to teach. In addition, 26% reported they were not prepared to work with children of varying abilities, and 20% reported they were not prepared to maintain order and discipline during their first teaching jobs.

School-university partnerships in education, including teacher education programs, are also critical to closing the achievement gap. Catelli (2006) states “critical to the design of the partnerships and the infrastructure of knowledge-based society is the ethical values, principles, and standards. They are central to the partnerships focused on educational equity and academic
success” (p. 190). Higher education’s purposes and obligations include the creating of a skilled and educated workforce, and also establishing links with principals and schools.

**Ethic of Care**

While schools struggle to define teacher quality, the answer partially comes from moving away from automatic, mechanistic ways of dealing with problem students; whether it is with disruptive students or with low achieving students. Taking time to listen, respond, and build relationships with them is the key element. This notion can be both easy and difficult at the same time. It can be easy because caring is what teachers do; it is why most teachers became teachers. The notion can be difficult because somewhere schools have become pre-occupied with being able to control and contain students, to force their compliance to the rules and regulations (Cassidy, 2007). The difficulty comes in convincing schools of the need to change their cultures to embrace students’ uniqueness and build relationships; this positive culture will help to counteract low student achievement and inappropriate behavior.

How does a school develop this culture of caring within its walls? It goes back to idea of the ethic of justice and care working together. Gilligan (as cited in Beck, 1994) writes that teachers and students are interdependent and this assumption is reflected in the view that we teachers are responsive to relationships and not necessarily self-governed (shouldn’t make automatic and mechanistic decisions). Looking at this responsiveness and relationship building draws attention to the differences between individuals; “justice becomes understood as respect for people in their own terms” (p. 24). It is this understanding that should be considered when working with students.

As teachers talk to students about problems they are having with their grades or when they discipline students, the difference between agreement and understanding needs to be
examined. It is this notion that captures the differences between the ethic of justice and an ethic of care. A potential error in using solely justice reasoning is that it confuses the teacher’s perspectives with an objective truth and tempts the teacher to put themselves in the student’s place. The potential error in using solely care reasoning is that teachers may have a tendency to forget their own terms and define themselves solely in the student’s perspective. There needs to be a common ground between the two ethics, being able to see the other’s point of view while still being true to our own perspectives and beliefs. Gilligan (as cited in Beck, 1994, p. 7) believes that “male theorists tend to see morality built on an ethic of justice as superior to that built on an ethic of care”. The researcher argues that an ethic of care should be superior to that of justice or at the very least should be held equal. Noddings (as cited in Beck, 1994, p.7) writes that “an ethic of care encourages the consideration of both the subjective and objective elements of situation”.

Beck (1994) states that the purpose of caring is to help individuals grow and actualize themselves; to foster development. In a teleological sense, development is the goal of caring. Teleological ideas are consequentialist; they are ideas that hold the moral value of practice is a function of the consequence of that practice (Callahan, 1988). True caring occurs when persons relate to others in ways that honor and encourage the healthy unfolding of all types of development. The teleologist would say that honor and encouragement are consequences of caring behavior.

Mayeroff (1995) defines caring as a process. Caring is a way of relating to someone that involves development; much in the same way friendships are made through mutual trust. A common pattern of helping others grow is devotion. This devotion can be shown by being present for the other for extended periods of time even in unfavorable circumstances and
difficulties. Caring also involves encouragement and assistance. Mayeroff (1995) lists several themes that are present in caring: (a) knowing, (b) alternating rhythm, (c) patience, (d) honesty, (e) trust, (f) humility, (g) hope, and (h) courage.

Knowing involves recognizing who the student is, what their strengths, weaknesses, and needs are. The administrator and teacher must know how to respond to those needs and also know their own strengths and weaknesses. Caring can only occur when the teacher becomes aware of these individual characteristics. Using the term alternating rhythms, Mayeroff (1995) refers to the fact that a teacher cannot care by habit; the teacher must be able to learn from the past, examine if their actions have made a difference and be able to adjust the actions as necessary to better help the student.

Patience, honesty, and trust all work together in the process of caring, and encompass the aspect of knowing the student as an individual. Patience does not mean that the teacher sits idly by waiting for the student to learn from them, but means that the teacher is able to give time and enable the student to learn at his or her own pace. Being patient also includes being tolerant of a student’s confusion and uncertainty. Honesty includes seeing the student for who he or she is, not who the teacher wants him or her to be. It comes with accepting that student for all his or her strengths and weaknesses. Trusting involves risk. Like knowing and patience, it necessitates being able to believe that the student can grow in his or her own time and in his or her own way. Lack of trust can be shown when teachers try to dominate and force students to fit into the vision they have for them. A caring teacher is one who demonstrates trust by providing assistance, encouragement, and exposure to relevant experiences (Mayeroff, 1995).

Humility, hope, and courage are also part of developing a caring relationship. Humility involves the belief that the teacher's knowledge about the student will continue to grow. There
will not be a point where the teacher has learned everything there is to know about the student. Humility also involves the acceptance that individuals learn from each other, realizing that it is not always the student learning from the teacher but that the reciprocal can happen as well. Hope is not to be mistaken for wishful thinking or unrealistic expectations. Hope is the belief in a caring relationship that helps the teacher be aware of the possibilities evident for the student. An important aspect of hope is courage. Hope does not happen without the courage to take risks, the courage to be there for the other in difficult situations, and the courage to face the fear of the unknown. All of the aspects involved in creating a caring relationship go together. Trusting gives the teacher or the student courage to be honest; patience gives the teacher or student humility to realize there is always something more to be learned. All of these should be present in relationships in schools to help create the culture of caring that is necessary for success; especially in the area of student achievement. It is a challenge for these ingredients to be present in all relationships with all students.

While discussing the importance of having a culture of care in schools there are many points to consider. A sense of community is important to the development of caring relationships; students need to feel that they are members of a larger group. Communities are critical to personal development; students have a need to be members of a group or community that cares for and about them. True communities are characterized by friendship, fellowship, love, and mutuality (Beck, 1994). A school should be the kind of community described, unfortunately for many students it is not.

When thinking about schools today with all populations, Beck (1994) describes three aspects of caring. Receiving, responding, and remaining are three activities of caring that should be part of the goals of a school if it is to help the students be the best students they can be and
prepare them for the future. Receiving is synonymous with Mayeroff’s (1995) definition of knowing. Receiving can only occur when the teacher knows the student, and is aware of his or her strengths and weaknesses. The next step in Beck’s activities of caring is responding appropriately. Caring includes some kind of action and that action should be in the direction of the growth and development of the student. The last activity of caring is remaining. Remaining means that teachers are committed to the student and to the relationship that has been built. Mayeroff (1995) refers to this as devotion. Devotion is developed in the process of overcoming obstacles and sometimes involves sacrifice. If a student begins to feel received and known, he or she may feel relationships being built and get a positive response along the way with a teacher who remains committed to his or her well being, and change may begin. However, the teacher who believes that no obstacles will need to be overcome to achieve that change will be disappointed. Both Beck and Mayeroff have similar ideas; all are critical in building a positive and caring culture in a school.

Disciplinary policies and punishment in schools and possibly some classrooms may not include many aspects of caring relationships. The challenge to find a place for caring relationships in school continues. Administrators and teachers struggle with disciplinary and low achievement issues daily. Where does caring fit in daily practice? Obviously schools cannot sit idly by while students fail their classes or violate codes of conduct repeatedly. What can be done?

First of all, a commitment to a creating a positive school culture must be made by the teachers and administrators. This is not something that can happen instantaneously as most would prefer. It will take some work, time, and commitment to be successful. In a school with hundreds of students, administrators hardly have the time to develop close and caring
relationships with every student. However, the challenge is to find the unruly, problem behavior students, and begin to develop caring relationships with them.

Educational administrators committed to an ethic of caring will demonstrate relationships between administrators, teachers, and students be seen as important. The relationships in a school are what make the school decent, honest, and moral. Administrators can promote an ethic of care by creating a positive culture and climate within a school (Starratt, 1991). This ethic goes beyond trying to increase test scores and pass a district report card; the ethic of care is what sets the climate and culture of a school so that the students can increase their test scores.

Research states that verbal ability and content knowledge are the most important attributes of a highly qualified teacher (Cochran-Smith, 2002; Kapland and Owings, 2001). As Beck (1994) and Mayeroff (1995) demonstrate, teaching is more than just the transmission of knowledge and ideas to students. There is more to teaching than content knowledge and best practices research (Anobi, 2006). Teaching includes forming relationships with students, collaborating with colleagues, and meeting the needs of students with diverse abilities, and backgrounds. In a survey of the public, more people valued teachers who had the ability to design lessons that interested their children than having a thorough understanding of content knowledge; demonstrating it is not just what teachers know, it is how well they communicate what they know (Kaplan & Owings, 2001). Learning is not just receiving information; it is processing information; it is processing usable knowledge, organizing and understanding information, and monitoring progress through learning goals (Cochran-Smith, 2002). Education is not just a simple test score; it is about preparing students to be successful and caring individuals in the world.
In regards to the achievement gap and student achievement in schools it is the researcher’s feeling that an increase in the ethic of care is necessary if society wants to teach values of tolerance, respect for others, diversity and even forgiveness. Gilligan (as cited in Beck, 1994, p. 8) says nicely what the responsibility of schools in regard to ethical behavior should be: “Those who care will recognize that they have a moral imperative to discern the real and recognizable trouble of this world and act to alleviate suffering caused by that trouble.” Highly qualified teachers have much more responsibility than just teaching students to be responsible for learning the academic content standards. Teachers must also teach students to be caring human beings; federal legislators seemed to have left part out of the definition.

**Teaching Style**

Evidence indicates that teaching styles influence student achievement and can make important differences in student learning (Opdenakker & VanDamme, 2006, Wentzel, 2002). Teaching style is a term used to “conceptualize the complexities of the teacher-student relationship” (Cohen & Amidon, 2008), meaning the teacher takes a teacher-centered or a student-centered approach to teaching (Opdenakker & VanDamme, 2006).

In a study of math teachers to explore the effects of teacher characteristics and teaching styles on student achievement, Opdenakker and VanDamme (2006) found teaching style matters. In a survey of teachers, the positive effects of a student-centered teaching style are seen in student achievement. Teaching style has a positive effect both on the instructional support teachers give the class and on the quality of the relationship between the teacher and the students. The student-centered teaching style is associated with a higher opportunity to learn and better integration of the students in the class group. Teachers using this style of teaching demonstrate the following actions in their classrooms: (a) stimulation of active student
participation, (b) differentiation of activities, (c) problem solving, (d) discussion of problems with colleagues, (e) development of relationships with students, and (f) use of data to direct teaching (Opdenakker & VanDamme, 2006).

Student-centered classrooms have been found to result in a deeper understanding of the subject matter, improved critical thinking, and synthesis of information (Giles, Ryan, Belliveau, DeFreitas, & Casey, 2006; Watson & Konicek, 1990). Student-centered classes have also been suggested to be better for long-term recall of facts, problem-solving, and increasing subject matter interest while teacher-centered classrooms have been suggested to be better for short-term recall of facts.

Giles et al. (2006) conducted a study on teaching style and found high achieving math students (students achieving a 90% or better on the last test) performed better in a student-centered classroom while lower achieving students (students achieving 60% or lower on the last test) performed better in a teacher-centered class; students of average ability performed well in either type of class. The results demonstrate the need for teachers to balance teacher-centered and student-centered activities within the classroom. Relying on one teaching style entirely may be alienating a proportion of the class. Secondly, high performing students have a need to be interactive and explore subject matter under the guidance of a teacher, whereas lower performing students prefer an enthusiastic teacher making the subject matter interesting with little or no student interaction or discussion (Giles et al., 2006).

Past research (Sarancho, 1980) has been done stating a teacher’s instructional style may be influenced by many factors: (a) his/her teaching preparation, (b) his/her teaching situation and (c) his/her learning style. Evans (2004) qualitatively investigated the nature of the impact a teacher’s cognitive style had on his/her teaching style. Evans described teaching style as analytic
or wholistic in the study. An analytic teacher is concerned about assessment, both theirs and their students, and having control over their learning and subject. A wholistic teacher is concerned about student needs, classroom management, and forming relationships; but less organized compared to analytics. The qualitative study concluded 40% of the group claimed to teach in the same way they had been taught themselves. The value of this particular study may be in the teachers gaining awareness of the impact of how they teach affecting students’ learning (Evans, 2004).

Other teaching styles found in the literature are indirect (sometimes called reciprocal teaching) and direct teaching styles. Indirect teaching styles can be compared to the student-centered teaching styles because the indirect teaching style involves a reduction of teacher control (Cohen & Amidon, 2008). An important characteristic of the indirect teaching style is students taking responsibility of their own learning. Furthermore, an atmosphere of acceptance may increase creativity and achievement levels (Rosenshine & Meister, 1994). Conversely, the direct teaching style can be described as teacher-centered; the teacher gives lectures and increases student compliance using direct teacher behaviors (Cohen & Amidon, 2008). These direct teacher style behaviors do the opposite of what the indirect teacher style behaviors intend to do; they inhibit student creativity and achievement (Cohen & Amidon, 2008).

Matching teaching style to the learning style of the students will result in a deeper understanding of the subject matter and a more positive attitude towards the subject matter as well. Many factors influence the way that a teacher presents information to students. Teachers must take the time to learn what the factors are and adjust them to fit the needs of the class because evidence indicates teaching style influence student achievement and can make important differences in student learning (Opdenakker & VanDamme, 2006).
Learning style can be as important as teaching style. Student success can be increased when student learning style is considered when the lesson is planned (Kazu, 2009). Learning style has been described by many researchers in many ways. Keefe (1987) describes learning styles as having cognitive, affective, and environmental aspects. Kolb (1984) defines a learning theory which becomes the basis of his learning style model. Kolb defines learning as the process of being in harmony with the social and physical environment; thus some people learn through feeling, thinking, watching and doing (Kazu, 2009). Finally, Dunn and Dunn (1993) consider developmental characteristics such as hearing, seeing, and socializing as primary modes of learning for some students and teachers need to be able to determine which ones will help their students be most successful.

Recognizing student learning style will contribute to student success and the effectiveness of the environment for the student (Kazu, 2009). Learning style gives opportunities for teachers to recognize the individual differences of students. The teaching style teachers use gives them the opportunity to devise learning approaches that take these differences into account (Kazu, 2009). Learning style is just as important for the individual student. When a student is aware of how he or she learns best, he or she will be able to integrate it into the learning process so learning will be successful (Biggs, 2001).

Student perceptions of the learning environment also effect a student’s learning behavior (Struyven, Dochy, & Janssens, 2008). This goes hand in hand with classroom climate literature by Fraser and Fisher (1983) who found relationships between class environments and learning outcomes. Struyven et al., (2008) found a positive linear relationship between a student’s likes and dislikes in instruction and student’s perceptions of the learning environment and their performance. If a student’s perception of the learning environment is positive, then the student’s
learning gains are greater and enhanced by adopting teaching methods which are preferred by the student. The opposite would also be true. Matching a student’s instructional preference is similar to providing individualized education; however, it may call for creative thinking and problem solving to be able to address the diverse learning preferences of the student population (Struyven et al., 2008).

Once learning style is established and a student attempts to learn new material, each student possesses a learning approach. Two learning approaches exist when students choose to take on a learning task (a) surface or rote-learning, and (b) deep or meaningful learning (Kizilgunes, Tekkaya, & Sungur, 2009). Students using a surface learning orientation are likely to believe that knowledge is dispensed by authority and that knowledge is certain and unchanging. In contrast, students using the deep learning approach are likely to believe that learning involves effort and is not determined by authority (Chan, 2003). Students perceiving environments which encourage deep approaches to learning facilitate higher quality learning experience more success than students in environments which perceive to discourage surface approaches (Trigwell & Prosser, 1991).

Teacher Use of Progress Book

Software Answers, a technology services firm located in Northeast Ohio, was established in 1994 by Paul Chaffe and Scott Miller. Previously, Chaffe and Miller worked as consultants to a large city school district and had a vision of providing software to school districts to improve the educational process. With a team of volunteers they developed the first version of Progress Book software, an online grade book and home-school communication system currently serving over one million students, parents, and educators (Software-Answers, Inc., 2007).
Unfortunately, the company does not have any research from a professional researcher to back up the data; however, a spokesperson from the company shared the fact that 75% of Ohio school districts are using Progress Book, and the company is branching out to nine additional states; the largest district using Progress Book has 180,000 students. These numbers are indicative of the positive effect the technology Progress Book offers to administrators, teachers, parents, and students is very beneficial. The spokesperson from Progress Book mentioned that the Ohio Department of Education has recognized Progress Book for being an important tool sparking parent involvement in improving students’ grades (C. Getty, personal communication, 11/10/2008).

District and administrative benefits of using a software program like Progress Book is that it gives a holistic view of student progress to principals and guidance counselors. Most importantly, it improves communication between schools and parents, thus increasing parent involvement in educational process.

Ongoing parent, student, and teacher communication is essential to success in school and increased student achievement (Seitsinger, Felner, Brand, & Burns, 2008). Progress Book’s parent access web site has improved the communication by allowing the parents continual access to information. The benefits of continual access include the following; parents can: (a) view student averages, assignment details and homework, (b) view all students’ progress with a single login, (c) immediately identify and communicate with teachers about potential errors on assignments, and (d) monitor student attendance and tardiness. Additionally, students have the added encouragement to be accountable for their educational responsibilities and have access to a monthly calendar to plan homework and extracurricular activities (Software-Answers, Inc., 2007).
Progress Book enables teachers to easily and efficiently monitor student progress. From the teacher’s perspective, Progress Book software enables teachers to do the following: (a) submit attendance electronically, (b) improve parent communication/student accountability, (c) create lesson plans and attach pre-entered academic standards, (d) save lesson plans from one year to the next, and (e) access the grade book from anywhere internet is available (Software-Answers, Inc., 2007).

Progress Book is an important tool for parent involvement in student schooling. Progress Book can improve communication between schools and parents and between teachers and students. Additionally, Progress Book has the added benefit of increasing the efficiency teacher duties such as creating lesson plans with standards and taking attendance.

*Other Teacher Best Practices*

The typical classroom may include students who have a myriad of behavioral problems, varied cultural backgrounds, and very diverse learning abilities. The increasing accountability placed on teachers to be responsible for each student’s individual needs to be met in addition to the academic content standards can be challenging (Rose & Meyer, 2002). Research-based practices are practices which have been found to have significant effects on student learning through rigorous peer-reviewed research studies. While undertaking a study of all research-based best practices is beyond the scope of this literature review and the present study, this researcher will focus on the following best practices: (a) making connections to prior learning, (b) ensuring contextualized instruction, (c) providing feedback for students, (d) using data-driven instruction, (e) using graphic organizers, and (f) differentiating instruction for students. The researcher has chosen to focus on these particular research-based practices because they are applicable to all
academic areas, not just to reading or math. These particular research-based strategies, as well as others not mentioned here, are easily applied within all classrooms.

Learning is cumulative and developmental; students learn best if they use what they already know to build new knowledge (Mason, Orkwis, & Scott, 2005). Meaningful learning takes place when students can relate new concepts to concepts they already know and try to draw relationships between the concepts, rather than acquiring facts in isolation (Araz & Sungur, 2007). Also critical to meaningful learning is the student’s intention to learn the content presented to them. If a student’s intent is to simply meet the minimum course requirements, meaningful learning may not take place. Students with higher levels of intrinsic motivation for high academic achievement are more likely to use the learning strategies presented by the teacher to attain meaningful learning (Araz & Sungur, 2007; Meece, Blumenfeld, & Hoyle, 1988).

Teachers must try to develop a sense of intrinsic motivation within students. One way to develop this sense of intrinsic motivation is through engaging lessons. Student behaviors demonstrating engagement may include asking questions, participation in class discussions, persistence, and concentration (Milne & Otieno, 2007).

Going hand in hand with prior knowledge is contextualized instruction; research supports instructional practices which ensure meaningful application and real-life experiences for students (Mason et al., 2005). Learning is most effective when the brain puts information into meaningful memories and experiences. This research-based principle is parallel with the student-centered teaching style which asks the teacher to fit the instructional skills and content to the individual rather than making the learner fit into a rigid inflexible curriculum (Rose & Meyer, 2002). Learning must be engaging for students to make sense out of new material. Teachers will benefit from making content engaging, interactive, and responsive to individual needs. However, lower-
achieving students may not always make the connections desired between the new content and prior experiences in ways that are productive for learning (Land, 2000). Lower-achieving students may strengthen incorrect ideas by misapplying prior experiences incorrectly, so caution must be taken. Many benefits exist to using contextualized instruction, but teachers must know the risks as well.

Providing instructional reinforcement in the form of feedback may have a positive effect on student achievement (Cotton, 2000). Research supports informing students of their progress on a regular basis (Butler & Nisan; Lysakowski & Walberg, 1981; McCarthy, Webb, & Hancock, 1995; Schunk, 1984). Feedback is an important component of the formative assessment process (Brookhart, 2008). Formative assessment helps to inform decisions in the classroom, helping to give information to teachers and students about how they are doing in the classroom relative to learning goals. Formative assessment is so critical that Shepard et al., (2005) state, “. . . formative assessment, effectively implemented, can do as much or more to improve student achievement that nay of the most powerful instructional inventions, intensive reading instruction, one-on-one instruction, and the like” (p. 277). To implement an effective formative assessment cycle the following steps should be implemented: (a) identify and post the essential skills (state standards) the students needs to master, (b) determine the post-criteria used to determine if students have mastered the skills, (c) provide an exemplar for the students to see what the skills looks like, (d) have the students produce a first draft, (e) provide an opportunity for students to assess each other’s work, (f) continue to provide opportunities for students to assess themselves, (g) provide specific and timely teacher feedback, (h) allow another opportunity to apply post-criteria as they revise work accordingly, and (i) repeat the cycle until the student reaches mastery of the concept or skill (Harlen, 2007). The major tenet of formative
assessment is allowing students multiple opportunities for success and to learn from the feedback they have received.

While teachers should give students immediate feedback on in-class assignments to help them understand and correct errors, teachers should also praise students for correct oral responses and written responses on assignments and tests. Effective praise is specific, and not used randomly or when unmerited (Kalis, Vannest, & Parker, 2007). Good feedback can be very powerful if it is done well; feedback should have both a cognitive and a motivational factor (Brookhart, 2008). The cognitive factor gives students the information about where they are in their learning and where they need to improve. The motivational factor gives students the feeling they have control over their own learning.

Using data to drive instruction is a critical part of student achievement. Teachers need to realize the importance of identifying, collecting, analyzing, and effectively using relevant data to inform decisions in the classroom. Teachers should establish procedures for collecting and reporting student achievement data; in addition, the teacher should establish what records (i.e., grade cards, discipline reports, performance assessments) are going to be analyzed (Cotton, 2003). The reports should be made available to all staff for use in planning, and for use in making quarterly reports to parents. At times, too much data for one person is available and so data teams may be created in buildings to ensure that data is constantly being monitored. School district leadership might consider training and support on the use of data to inform instructional decisions.

Nonlinguistic representations or the use of presenting knowledge in the form of imagery (e.g., mental pictures of physical sensations such as smell, taste, touch, or smell) is different than presenting knowledge to students linguistically (Richardson, 1983). Teachers primarily present
knowledge to students in the linguistic form; talking to them about new content or having he or she read about the new content (Marzano, Pickering, & Polluck, 2001). Engaging students in the creation of nonlinguistic representations may stimulate students to increase activity in the brain (Gerlic & Jausovec, 1999).

Creating graphic organizers is a nonlinguistic representation that may enhance the understanding of content area material for students (Robinson & Kiewra, 1996). Graphic organizers are one of the most common ways for students to organize the linguistic information (words) and non-linguistic (symbols, pictures) to represent relationships (Marzano, et al., 2001).

Differentiated instruction for students is a critical strategy to use in every classroom. Because all students do not learn in similar manners, teachers must be ready to accommodate all learners in the classroom by teaching the same lesson in a variety of ways. Differentiated instruction can be defined as “teachers individualizing criteria for student success, teaching methods, and means of student expression while monitoring student progress through ongoing, embedded assessment” (Rose & Meyer, 2002, p. 7).

The Universal Design for Learning (UDL) is a framework incorporating the idea of differentiated instruction and pairing it with technology. A successful learning environment according to UDL principles supports and challenges students while minimizing barriers will also: (a) support the recognition of learning, while providing multiple flexible methods of presentation, (b) support strategic learning, while providing multiple, flexible methods of expression, and (c) support affective learning, while providing multiple, flexible options for engagement (Rose & Meyer, 2002). The common theme in all of the UDL principles is to provide students with a wider variety of options within the classroom, or differentiation.
Furthermore, the UDL framework can help teachers set clear goals, individualize instruction, and assess student progress. Rethinking how teachers set goals is a result of the UDL framework; the framework guides and challenges teachers to analyze the true intent of the goal set. With clear goals set, more student success will follow. The technological application and digital tools in the UDL framework allow for more individualization than traditional instructional materials used in the classroom. With more student individualization, more student success will follow. Finally, the research-based practice of on-going assessment is embedded in the UDL framework. Tools for the assessment are provided to align assessment with student instructional goals (Rose & Meyer, 2002). Universal Design Learning allows teachers to teach the whole class but differentiates to individual students by using digital media.

Finally, teacher collaboration has been shown to increase student achievement (Rasberry & Mahajan, 2008). Kouzes and Posner (2002) agree that “collaboration is the critical component for achieving and sustaining high performance” (p. 242). While collaboration with teachers is not a specific in-class strategy used with students to directly impact achievement, teacher collaboration has been found to improve student performance though the development of professional learning communities as teachers explore new teaching practices (Rasberry & Mahajan, 2008). Teacher collaboration can help students meet educational goals by demonstrating critical thinking and problem solving and self-reflection as a team to resolve issues that may be impeding student progress. High achievement may not be possible unless there is a strong sense of shared creation and shared responsibility (Kouzes & Posner, 2002). Collaboration between teachers can take many forms depending on what kind of building teachers are teaching in; at the high school level, teachers teaching the same content level may collaborate, at the elementary level teachers at the same grade level. Whatever form it takes
collaboration should not simply become just one more thing teachers must do, it should be an integral part of planning and decision making.

Research-based teaching practices are numerous. Undertaking a study of all research-based teaching practices is beyond the scope of this literature review. Making connections to prior learning, contextualizing learning, differentiating instruction, providing feedback to students, using data-driven instruction, and collaboration are just a few of the many research-based practices briefly reviewed for the reader. It is critical teachers are aware of and use current research-based practices in classrooms to increase the success of students.

School Factors Effecting Student Achievement

Many school characteristics elicit increased student achievement. The focus of this literature review and the present study will be class size, school climate, classroom climate and school leadership. These particular characteristics were chosen by the researcher because these are the variables in the present study.

Class Size

Historically, researchers have found that a positive correlation exists between smaller class sizes and student achievement (Glass & Smith, 1979). Glass and Smith (1979) conducted a meta-analysis of over 80 class size studies; a relationship between class size and student achievement emerged. While their study was dated, it shows that historically class size has been linked to student academic achievement.

Often, one will see measures of pupil-to-teacher ratio for a school district. Class size does not equal pupil-teacher ratio. Pupil-to-teacher ratio is a global measure of the human resources a district employs; this number often includes teachers who spend part or all of their work day as administrators, librarians, special education support staff, itinerant teachers, or other roles
outside the classroom (Ehrenberg et al., 2001). Pupil-to-teacher ratio should not be mistaken for
class size which is a more difficult variable to measure. Class size can vary for a student from
day to day and at different times throughout a school day because of student mobility, absences,
and truancy (Ehrenberg et al., 2001). Class size data is more closely linked with learning than
pupil-to-teacher ratios which are more readily available.

Class size data are not regularly collected; however pupil-to-teacher ratios are collected.
The annual pupil-to-teacher ratio between 1969 and 1997 declined 26% nationally from 22.7 to
16.6 (Ehrenberg et al., 2001); however, there was not a large increase in test scores. Many
reasons exist about why the inferences the decline in pupil-to-teacher ratio did not have a major
impact on student academic achievement: (a) test scores are only one measure of student
achievement, (b) the background of students changed drastically during this time period, and (c)
children living in poverty and in one-parent homes increased.

The statistics need to be analyzed with caution; many factors other than pupil-teacher
ratio influence student achievement (Ehrenberg et al., 2001; Rice, 1999). In fact, The Coleman
Report, in 1966 was a large scale study which came to the major conclusion that variations in
family background characteristics and community level characteristics were much more
important in explaining variations in student achievement than pupil-teacher ratios (Ehrenberg et
al., 2001). To control for the other factors’ influence on student achievement true experiments
need to be conducted. Most research to date has used non-experimental data. The most notable
study focusing on a true experimental design was conducted in the state of Tennessee.

Tennessee’s Project STAR (Student/Teacher Achievement Ratio) was a state sponsored
$12 million project which began in 1985. Students entering kindergarten were randomly
assigned to one of three treatments: (a) a class of 13 to 17, (b) a class of 22 to 26, or (c) a class of
to 26 with a full-time aide. The students attended the classrooms for four years; a new teacher was randomly assigned each school year. After four years, they were returned to a regular size classroom. The final sample included approximately 128 small classes (1,900 students), 101 regular classes (2,300 students), and 99 regular classes with an aide (2,200 students) in the first year, and almost 12,000 over the four-year study.

Results from the study have been analyzed differently by different researchers. Increased student achievement, improved teaching conditions, and improved student behaviors have all been related to decreased class sizes (Finn & Achilles, 1999). The study found statistically significant achievement differences between students in small classes and the other two groups. The differences also appeared to persist into the upper grades after the students returned to regular size classes (Ehrenberg et al., 2001). However, there is question as to the validity of the experiment (Hanushek, 1999). Hanushek (1999) concluded that class size alone does not lead to increase in student achievement. He grouped all of the studies done on class size; tallied a count of the studies and found 13% to be statistically significant in favor of smaller class size, 15% were found to be negative; and 72% were not different from zero.

In addition to Tennessee’s Project STAR, many other quasi-experimental studies have been done regarding class size but they lack the true randomization and magnitude needed to produce evidence of what class size effects on student achievement really are (Ehrenberg et al., 2001). Some states have adopted and implemented class size policies as a result of the Tennessee STAR study. Wisconsin, California, and Florida have implemented class size caps.

The Wisconsin Student Achievement Guarantee in Education (SAGE) was designed as a project beginning in the 1996-1997 school year. Schools with a high level of poverty were required to implement four interventions; (1) reduced class size, (2) opening early and closing
The final conclusion was that the effects of smaller class size could be achieved without actually decreasing the class size (Hattie, 2005). Based on findings from the STAR research, California invested one million dollars in reducing K-3 class sizes from 30-20. The rapid expansion of the teaching force needed to teach additional classes appears to have led to the deterioration in average teacher quality (Hattie, 2005).

Despite the various results of research available on class size, parents view class size as an indication that their children are receiving more attention in class from teachers; teachers prefer small class sizes because they translate into small workloads and are typically easier to manage; and administrators prefer small classes because they indirectly increase school climate by making parents and teachers happy (Rice, 1999). Efforts have been made to recognize the fact that class size may vary from by both type of student and subject studied (Rice, 1999). Student from low socio-economic status (Hattie, 2005; Nye et al, 2002) students who are low achieving, students in elementary grade levels (Vignoles, 1998), and students in math and science classes at secondary levels are found to benefit more from being in smaller classes (Rice, 1999).

While implementing class size reduction policies has been a popular improvement strategy, some caution should be taken. When implementing class size reduction, qualified teachers are necessary to teach small classes; many times district leaders assume qualified teachers are available to staff the extra classrooms. However, if the teachers hired are not qualified, students will be unlikely to increase their achievement regardless of decreased class size (Ehrenberg et al., 2001). In addition the problem of finding qualified teachers, there is the problem of finding adequate space for the additional classrooms. If there is not enough space,
some districts have to look at the possibility of new construction. Since Florida schools imposed class size caps, costs have climbed more than three billion dollars per year to cover the costs of teacher salaries and classrooms (McNiel, 2008).

While there are many studies on class size, the research is inconclusive. The results should be interpreted with caution. Class size reduction may not be the most cost-effective way to increase student achievement; school leaders should keep in mind that class size reduction is but one of a number of options to pursue to increase student achievement (Ehrenberg et al., 2001).

*School Climate*

A positive school climate is linked to academic achievement (Benner, Graham, & Mistry, 2008; Hoy & Hannum, 1997; Koth, Bradshaw, & Leaf, 2008; Stewart, 2007; Uline & Tschannen-Moran, 2008) while negative school climate is linked to student misconduct and aggression (Koth et al., 2008; Wilson, 2004). School climate can be defined as the beliefs, values, and attitudes shaping the interactions between the principals, teachers, and students which set guidelines of acceptable behaviors and norms for the school (Koth et al., 2008). The climate of the school is also influenced by the educational and social values of the community and the social interactions between peers and teachers. In addition, school climate also relates to situations within the classroom and to the school as a whole. Unfortunately, many factors are often categorized under the term school climate (Hoy & Hannum, 1997). An advantage of this is that school climate can be used as a helpful integrating concept, but a clear definition is needed if an understanding is going to be reached about the relationship between school climate and student achievement.
Measuring school climate is just as difficult as defining school climate. Climate can be measured at the school level, meaning that it is assessed as the students’ average performance, or student body composition. However aggregating the individual data into group level data does not take into account the diversity of the individuals studied, and thus changes the investigation of the climate. Classroom factors have a greater influence on school climate than school factors do; the implication is that factors at all levels, both the school and classroom levels, should be examined before implementing initiatives to improve school climate (Koth et al., 2008). A discussion on class climate follows this section.

According to Stewart (2007) school climate can be measured in three ways: by its (a) school culture, (b) school organization, and (c) school milieu. School culture can be defined as the unwritten beliefs, values and attitudes that a school holds to be true. Culture can also be defined as the way that things are traditionally done, and the overall feeling of a school (Pepper & Thomas, 2002). The culture of a school is important because it affects student learning, behavior, and sense of belonging, which also influences academic achievement (Ma, 2003). Students who feel encouraged to do well are more committed to school and are more engaged in the learning environment.

A sense of belonging and community in school is very important. Students’ sense of community is linked to motivational and behavioral factors associated with school success (Vieno, Perkins, Smith, & Santinello, 2005). Further, a sense of community in school is associated with intrinsic motivation, academic self-efficacy, interest in academics, and less problem behaviors (Battistich & Horn, 1997). The sense of community and belongingness in the school is an important factor in developing emotionally and academically (Pretty, Conroy, Dugay, Fowler, & Williams, 1996). Increasing student involvement in rule making or organizing
events; having student perceive the school environment as democratic were important in
developing a sense of community in a study done by Vieno et al. (2005). Educators may also
increase feelings of belongingness and connectedness to school by fostering an involvement in
school (e.g., after school activities, extracurricular activities). Intervening to improve feelings of
belongingness may be more cost effective than trying to change structural characteristics of
school (e.g., class size) that may also influence student achievement (Benner et al., 2008).

The school organization, defined by Stewart (2007), is the aspect of school climate
measured by class size and school size. The researcher has addressed this topic in a previous
section of the literature review. School milieu includes the background characteristics of the
school population including the ethnicity, gender, and socio-economic status. The school milieu
also includes teacher experience and training. The researcher has addressed the importance of
this topic previously in the literature review as well. The school milieu is believed to influence
student beliefs, values and attitudes regarding academic achievement. The school’s physical
location is also a part of the school milieu. Whether the school is considered urban, suburban, or
rural, has also been associated with student achievement (Rumberger & Palardy, 2005). Schools
in poorer urban communities may experience more problems than more affluent suburban or
rural communities (Gottfredson, 2001). Larger urban schools often have higher incidences of
dropout, school violence, higher numbers of inexperienced teachers, teacher student alienation,
and academic failure; all contributing to negative school climate. Lastly, socio-economic status
(SES) is a part of school milieu; SES impacts the amount of resources available to educate
students (Stewart, 2008).

Schools impact students largely through their climate (Stewart, 2007). According to an
ecological model of human development (Brofenbrenner, 1979) student academic achievement is
influenced by many factors in their environment, but also by many aspects in their school
environment as well. These factors, in the discussion of school climate, may include but are not
limited to (a) social/minority factors, (b) discipline issues, (c) teacher attitudes/student-teacher
relationships, and (d) the condition of the school building.

The school plays a role in linking factors such as social class to academic competence.
For example, the percent of minority students and the percent of students on free and reduced
lunch contribute to the environment of the school and affect the quality of the teachers hired. The
quality of teachers hired will affect student achievement; therefore minority population of the
school indirectly affects student achievement (Myers, Kim, & Mandala, 2004). Benner et al.
(2008) found that greater diversity was found to be related to poorer perceptions by students of
academic climate and general school climate. African American students have a higher need for
supportive environments and teachers who are encouraging and fair. Multi-cultural training is
recommended so teachers can demonstrate knowledge of diversity in the classroom and ensure
the appropriate interactions between teachers and all students (Stewart, 2007).

In regard to discipline issues, student reports of class disruptions as a measure of school
climate had a negative impact on student learning (Rumberger & Palardy, 2005).
Many factors put youth at risk for problem behavior and delinquency, both inside and outside of
schools. Moreover, schools have the ability to provide protective factors for youth as well.
Protective factors schools can provide help youth resist the influence of risk factors all around
them. The protective factors schools provide might include the following: (a) a safe and positive
learning environment, (b) high yet achievable academic and social expectations, and (c) an
environment which facilitates academic and social success (Furlong & Morrison, 2000). By
providing protective factors to youth, schools can help youth fight the risk factors of delinquency in the future and help them make appropriate choices.

Researchers have also identified the following factors in schools contributing to youth delinquency: (a) academic failure, (b) exclusionary disciplinary practices, and (c) dropout (Skiba, Michael, Nardo, & Peterson, 2002; Wald & Losen, 2003).

Exclusionary disciplinary practices perpetuate a cycle of academic failure which often leads to school dropout. The academic failure or low grades students receive often lead to behavior problems which result in disciplinary practices removing the student from an academic setting. The removal decreases the opportunities the student has to gain academic skills and appropriate social behaviors. Additionally, the removal is not effective in reducing the behavior it was intended to address in the first place. Skiba and Noam (2001) state suspension from school is reported as the major reason for dropping out of school. The outlook for dropouts is bleak; 82% of the adult prison population and 85% of the juvenile prison population is comprised of high school dropouts (Coalition for Juvenile Justice, 2001). Additionally, high school dropouts have a life expectancy that is 9.2 years shorter than that of a high school graduate and a high school dropout earns about $260,000 less over a lifetime than a high school graduate (Center for Mental Health in School, 2005).

Attendance at school is negatively correlated to academic failure, suspension, and the dropout rate (Christle, Jolivette, & Nelson, 2005). This finding supports the premise of students feeling a sense of belonging are connected to school and less likely to encounter the three school risk factors (Mulvey & Cauffman, 2001). The idea of student engagement runs parallel with the sense of student belongingness and school protective factors mentioned previously in the literature review. Engagement in school is associated with many positive outcomes which would
serve to combat youth discipline issues and delinquency. The positive outcomes of engagement include: (a) positive academic achievement, (b) supportive teachers and peers, (c) opportunities for choice, and (d) sufficient structure (Fredericks, Blumenfield, & Paris, 2004). Conversely, the disengaged student is associated with behavioral problems and learning problems, both of which may lead to school dropout.

Unfortunately, school misbehavior occurs daily in every classroom across America. When students misbehave, a natural reaction is to want the student to experience the consequences of misbehaving and also for other students to see the consequences of the misbehavior. The goal is that public awareness will deter future misbehavior (Adelman & Taylor, 2008). The result of the goal is considerable time is spent on discipline and classroom management.

The punitive exclusionary disciplinary systems in place somehow assume if teachers stop the misbehavior, the student will become engaged in school and become amenable to the teacher’s teaching. The assumption ignores the reality in schools: students who are continually punitively disciplined manifest poor academic achievement and eventually drop out. The reality is that relying on negative consequences often produces more negative behaviors.

The answer lies in developing proactive disciplinary practices. “Stopping misbehavior must be accomplished in ways that maximize the likelihood that the teachers can engage/re-engage the student in instruction and positive learning” (Adelman & Taylor, 2008, p. 2). In general, school disciplinary practices should emphasize positive approaches to reducing misbehavior. Furthermore, recognizing the application of consequences is insufficient for prevention of future misbehavior is a large part of the awareness effort.
One reaction to negative approaches to discipline has been to develop initiatives for using positive behavioral interventions and supports. The researcher will briefly expand on a specific data-driven model utilizing school wide positive behavioral support (SWPBS). School-wide positive behavioral support (SWPBS) is a process that schools can use to improve services for all students by creating systems in which intervention decisions are informed by data and guided by research (Ervin, Schaugency, Matthews, Goodman, & McGlinchey, 2007). SWPBS shifts the traditional emphasis on reactive, punitive discipline methods (e.g., time-out, suspension, expulsion) to more proactive, preventive, and educationally focused methods. SWPBS encompasses a wide range of interventions that are implemented in a systematic manner based on a student’s demonstrated level of need (Adelman & Taylor, 2008). The program is meant to address factors in the environment relevant to the causes and correction of behavior problems.

While the focus of the initiative was initially on special education, it was expanded to school wide applications, with an emphasis on teaching specific social skills (Bear, 2008). SWPBS provides a continuum of supports and preventions for (a) students not experiencing learning or behavioral difficulties, (b) students at-risk for learning or behavioral difficulties, and (c) students currently experiencing learning or behavioral difficulties (for more detailed information on SWPBS see Bear, 2008; Clonan, McDougal, Clark, and Davison, 2007; Ervin et al., 2007; Gresham, 2004; Sugai, Sprague, Horner, & Walker, 2000).

Teacher attitudes and behaviors have been directly related to student achievement; while the converse is also true, disengaged teachers negatively impact student achievement (Hoy, Hannum, & Tschannen-Moran, 1998). Sufka and George (2000) found that effective teachers establish relationships with students and take the time to establish rapport with the class. Student perceptions of school climate are important; adolescents with higher perceptions of school
climate earn higher grades and perform better on standardized tests (Benner et al., 2008; Stone & Han, 2006). Students in higher performing schools perceived a more positive academic climate and feelings of belongingness. Students’ positive perceptions of relationships with teachers were associated with higher grades (Benner et al., 2008; Loukas, Suzuki, & Horton, 2006).

Stewart (2007) conducted a study on school climate and found that schools with greater cohesion, that is schools with more positive interactions between students and teachers, had higher grade point averages (GPAs). In a similar study, Stewart (2008) replicated earlier findings when she found that out of six school factor variables studied, school cohesion was the only school variable to have a significant effect on GPA. This finding suggests that students who care about and feel supported by their teachers and friends are more likely to develop ties with the school and develop an appropriate and acceptable school behavior. In addition, students who are encouraged to do well in school, and try hard, may be more committed to the overall educational process (Carbonaro, 2005). Furthermore, teacher efficacy is also an important concept. Teachers believing all students can learn and that they can teach them are likely to be successful; Teacher sense of efficacy is related to student academic achievement (Hoy & Hannum, 1997; Ross, 1992).

Poor school climate may result when the physical school facilities are poor. The physical state of the school is a predictor of school achievement (Berner, 1993). Several building features have been shown to be related to student achievement: (a) building age, (b) climate control, (c) lighting, (d) indoor air quality, (e) acoustical control, (f) design classifications, and (g) overall impressions.

Students attending non-modernized buildings scored lower on basic skills assessments than students attending school in more modernized buildings, showing that the building age
matters. In addition, many older buildings may not be able to accommodate technology and curriculum innovations (Chan, 1996). Air temperature and quality are two of the most important elements found to influence student achievement (Uline & Tschannen-Moran, 2008). Daylight offers the most positive effects on student achievement, most possibly due to the biological effects of sunlight on the human body (Wurtman, 1968). Acoustics have also been shown to have an effect on student achievement. Specifically, chronic noise has been shown to have a negative effect on student learning (Maxwell & Evans, 2000). Specific design classifications, such as large group meeting places, natural light, pleasing and appropriate color, and the presence of technology for teachers have also been noted in the research as being related to student achievement (Tanner, 2000).

When learning is taking place in poor facilities, a clear focus on academics is not taking place; the learning environment is less likely to be perceived as orderly and serious (Uline & Tschannen-Moran, 2008). When the buildings are in disrepair, there is less likely to be community support for the schools. The teachers’ attitudes and behaviors are related as well; teachers are less likely to be enthusiastic about coming to work if the building they work in is in disrepair or in poor quality.

The manner in which a school building is designed, managed and maintained speaks volumes to the community both within and outside its walls (Uline & Tschannen-Moran, 2008). School building reconstruction and repair is a huge challenge for public education. School district leaders struggle to convince local taxpayers that their investment to renovate or replace inadequate school buildings would be worthwhile. Evidence that school climate does play a role in the effect that school building quality has on student achievement suggest it should be taken seriously by taxpayers.
School climate has been defined as a shared set of beliefs shaping the interactions between students, teachers, and administrators (Koth et al., 2008). School climate and its many dimensions (i.e., social/minority factors, discipline, teacher attitudes/student-teacher relationships, and school building condition) have been shown to have an impact on student achievement (Benner et al., 2008; Carbonaro, 2005; Stewart, 2007; Uline & Tschannen-Moran, 2008).

**Classroom Climate**

Classroom climate can be defined as the classroom environment involving the shared perceptions of the students and the teachers (Sinclair & Fraser, 2002). The relationship between classroom climate and cognitive and affective outcomes has been well documented (Ames, 1992; Church, Elliot & Gable, 2001; Dorman, 2001; Fraser, 1989; Fraser & Fisher, 1983; Walberg & Anderson). Having classrooms that provide instruction to diverse learners is more important now in this age of accountability and high stakes testing which necessitates an approach that considers the student’s interaction with the classroom environment. According to the social learning theory, it is the meaningful environment which is the best predictor of a person’s actions (Anderson, Hamilton & Hattie, 2004).

Several variables contribute to a positive classroom climate. Sinclair and Fraser (2002) named five variables contributing to classroom climate: (a) cooperation, the extent to which students cooperate with each other during class activities; (b) teacher support, the extent to which the teacher helps, encourages, and is interested in the student; (c) task orientation, the extent to which it is important the class stays on task and complete assignments; (d) involvement, the extent to which students participate actively in his or her class activities or discussions; and (e)
equity, the extent to which the teacher treats all students equally including the distribution of praise and questioning.

Walberg and Anderson (1968) investigated 76 schools across the United States. They found institutional role expectations (i.e., organization of student roles within the classroom) and individual personality dispositions impact classroom climate by students behaving in such a way to satisfy certain personality needs (i.e., satisfaction, intimacy, and friction). Different perceptions of classroom climate are associated with different kinds of cognitive growth and achievement (Walberg & Anderson, 1968). Furthermore, perceptions of climate also predict the affective growth the course intended to bring about (i.e., students enjoyed the class so they perceived the class as democratic and as having clear goals) (Fraser, 1989; Fraser & Fisher, 1982; Walberg & Anderson, 1968).

In the Walberg and Anderson (1968) study, isomorphism - the perceived equality of class membership - appeared to be very significant; if one member was treated favorably over another, “the energies of the group are diverted from the attainment of the institutional or private goals into the resulting dissention” (p. 48). Additionally, the climate measure of synergism - the personal relations between class members - predicts learning (Walberg & Anderson, 1968). It is not the identification with the group that correlates with learning but the perception that the class is personally gratifying and without friction that correlates with learning. Walberg and Anderson (1968) were able to conclude that a significant relationship exists between class climate and learning; specifically that isomorphism (equality) predicted learning significantly and that synergism (personal relations between class members) also predicted learning significantly.

In a more recent study Anderson et al. (2004) measured the classroom climate variables of: (a) competition, how much students compete with each other and the recognition of how
difficult it is to achieve good grades; (b) order and organization, how orderly the classroom is and how organized the assignments are; (c) rule clarity, how clear the rules are and how apparent the consequences are of those rules if broken; (d) teacher control, how strict the teacher is in enforcing the rules and how severe the punishments; (e) affiliation, how friendly the students are and how much the students help each other and enjoying working together. Anderson at al., (2004) found that an important element in the classroom is affiliation. This finding suggests that high levels of friendship and a sense of relationship is important to the educational process (Furrer & Skinner, 2003).

Two studies (Anderson, et al., 2004; Walberg & Anderson, 1968), separated by 36 years conclude synergism or affiliation; or put in simpler terms, relationships are a significant factor to academic success. Educators need to be looking for ways to foster the development of high affiliation in the classroom. Cooperative learning activities may be one way to achieve this goal; cooperative learning strategies have been associated with improved peer relations (Talmage, Pascarella, & Ford, 1984).

The development of the classroom as a learning community is another way to foster positive relationships within the classroom (Watkins, 2005). Paying attention to both social relations and learning brings better learning, better performance, and better behavior into the classroom (Wang, Haertel, & Walberg, 1990). Learning has long been associated with the transmission and delivery of information; learning has been equated with being taught. A fewer number of classrooms view learning as individual sense making or even more that “in a learning community the goal is to advance collective knowledge and in that way support the growth of individual knowledge” (Watkins, 2005, p. 48). How students think about thinking,
metacognition, is a key process for learning and engaging learners in the classroom; it is crucial for developing a learning community in the classroom (Mason, 1998).

Many advantages exist for the classroom as a learning community. Students become more involved, and have an increased sense of belonging which leads to greater relatedness, participation, and motivation in the classroom. A collaborative learning atmosphere develops (e.g., turn-taking, mutual respect for ideas, and trust building), and students are more likely to become responsible for their own learning and become motivated toward learning for its own sake (Crawford, Krakcik, & Marx, 1999). The students demonstrate outcomes such as (a) self-reflection, (b) metacognition, and (c) the ability to define his or her own knowledge (Watkins, 2005). Specific skills students demonstrated in such classrooms were that (a) student’s domain specific content was retained better, (b) students became better at applying knowledge, (c) student s became better at transferring knowledge to other domains, (d) students more than doubled their comprehension skills, and (e) student’s argumentation skills improved.

The key element in learning communities is that students are active participants in the learning process, aware of what they are doing and why. Learning becomes a matter of understanding and not simply gathering the facts (Watkins, 2005). It is important to fit new information with what is already known and that learning is a matter of learning increasing complex information and not just simply answering all of the questions. Interventions that focus on running classrooms as learning communities have proven viable; however, changing the culture of the classroom where learning is the focus as opposed to teaching may be a challenge, as the research on learning communities is against the current dominant discourse (Watkins, 2005). The classroom as a learning community has similar elements to the previous studies mentioned synergism (Walberg & Anderson, 1968), affiliation (Anderson, et al., 2004), and
cooperative learning (Talmage et al., 1984); students need to work together to realize successful cognitive and affective outcomes. Additionally, it is not enough for teachers to be informed about the classroom environment; teachers must take time to reflect on feedback received from students, brainstorm ways to improve the environment, implement new techniques and assess if change has occurred (Sinclair & Fraser, 2002).

Developing relationships with students also is method to establishing a positive classroom climate. Relational closeness and conflict in the classroom depends in part on the student’s classroom behavior (Buyse, Verschueren, Doumen, VanDamme, & Maes, 2008). Problem behaviors, especially externalizing (hyperactive and aggressive) behaviors and internalizing (withdrawn, anxious, fearful) behaviors have been proven to jeopardize the quality of teacher-student relationships. For many teachers it may be easier to ignore a difficult student rather than design interventions to develop a more successful positive teacher-student relationship (Howes, Phillipsen, Pesiner-Feinberg, 2000). Some teachers choose to believe a poor relationship is inevitable whereas others will take on the challenge to develop a relationship with a challenging student with behavioral or learning difficulties.

Emotional support refers to the way in which teachers contribute to a positive emotional climate (Buyse et al., 2008). Emotional support includes how warm and respectful the teacher acts towards the students or conversely how much anger or irritability is displayed towards the students. Emotional support may also include how sensitive the teacher is in interactions with the students. Sensitivity includes the teacher’s awareness of the student’s level of academic and social functioning and the teacher’s responsiveness to the student’s needs in these areas (Buyse et al., 2008). Emotional support is also related to the idea of the teacher’s personal involvement in the student’s life; this can be described as the teacher’s ability to gain personal information
about the student. This aspect of classroom climate is especially important for students with behavioral problems so they are able to build their capacity for relationship building in the classroom and beyond.

When classrooms are well managed, students are able to understand how to behave so that the majority of the class time can be spent on instructional activities. Good classroom management includes the teacher’s capacity to manage student’s behavior using effective methods to prevent and redirect misbehavior. Good behavior management is proactive rather than reactive; teachers should anticipate rather than respond to disruptive behavior (Yates & Yates, 1990). Good behavior management is also especially important for the quality of teacher-student relationships. Students exhibiting externalizing or internalizing behaviors benefit from having an emotionally supportive teacher (Buyse et al., 2008). Emotional support seems to be a protective factor for the relational function of children at risk due to maladjusted behavior.

Efforts to improve classroom climate focus on several aspects within a classroom. Cooperation (Sinclair & Fraser, 2002), equality (Fraser, 1989; Fraser & Fisher, 2002; Walberg & Anderson, 1968), the relationships between classmates (Anderson, 2004; Walberg & Anderson, 1968), and the relationships between teachers and students (Buyse et al., 2008) all can contribute to a positive classroom climate. Furthermore, developing a positive climate can lead to the development of the classroom as a learning community which will ultimately lead to better student performance and behavior (Wang et al., 1990).

**Instructional Leadership**

Actions of the principal can have widespread impact on many students. Effective educational leadership makes a difference in improving student learning (Liethwood & Jantzi, 2000; Nettles & Herrington, 2007). While the relationship between principal behavior and
student achievement exists, it is unclear which specific principal behaviors contribute to increased student learning. Because causal relationships are unclear, the direct effect of principal behavior on student learning has been replaced by a focus on the indirect influence principal’s behavior has on student achievement through their interaction with teachers and the school environment (Nettles & Herrington, 2007; Witziers, Bozkers, & Kruger, 2003). This section will review the literature focusing on the indirect influence of principal leadership on student achievement.

Effective school leadership must include the principal in the role of the instructional leader. An instructional leader must: (a) give feedback, (b) model effective instruction, (c) solicit opinions, (d) make suggestions, (e) support collaboration, (f) provide professional development opportunities, and (g) give praise for effective teaching (Blasé & Blasé, 2000). Many researchers have described the traits of an effective instructional leader (Heck, et al., 1990; Nettles & Herrington, 2007; Marzano, Waters, & McNulty, 2005; Saphier, King, & D’Auria, 2006); many of the same factors are common in the literature of important traits of an effective leader anywhere.

An effective school leader keeps a safe and orderly environment for students. Principals can do this by (a) setting clear expectations of behavioral standards, (b) ensuring behavioral policies are consistently applied to all students, and (c) delegating the responsibilities for discipline throughout the school (Cotton, 2003).

Transformational leadership was introduced to guide leaders to take schools into the 21st century (Leithwood, 1992). Transformational leadership occurs when people raise one another to higher levels of motivation (Kouzes & Posner, 2002). Transformational leaders tend to be proactive and engaged in bringing about positive change; proactive people tend to work harder
and persist in achieving goals more readily where others tend to give up, especially in the face of adversity (Kouzes & Posner, 2002). In a school setting, a transformational leader (a) develops and maintains a positive school culture, (b) promotes teacher development, (c) helps the school solve problems collaboratively (Liethwood, 1992; Pepper & Thomas, 2007).

Stakeholder involvement as a descriptor of effective school leadership involves the principal’s ability to (a) build leadership capacity in teachers and staff, (b) encourage team focus on school goals, (c) use efficient and flexible organizational skills, and (d) distribute leadership throughout the school (Rea, McLaughlin, & Walther-Thomas, 2002). Getting stakeholders involved in all school processes is a critical step in school leadership. An effective school principal must monitor school progress. Personal monitoring of classrooms, participating in team meetings, and paying close attention to student performance are a few strategies mentioned in the research to monitor school progress (Nettles & Herrington, 2007).

A characteristic of an effective school leader is to maintain a school-wide focus on critical instructional areas. The principal should provide collaboration time for teachers to work together regarding instructional issues so that students’ academic needs can be met more readily. A principal who is willing to make time for instructional discussion makes three areas central to instructional focus: (a) communicating school goals to stakeholders, (b) monitoring the instructional process, and (c) promoting the academic learning (Nettles & Herrington, 2007). An effective instructional leader promotes the learning climate by maintaining high expectations for learning, providing sufficient resources, and ensuring adequate professional development opportunities for teachers.

High expectations for student performance held by the principal are an important component of effective school leadership. Consistently communicating the expectations to
students has been shown to have a relationship to increasing student achievement in schools (Leithwood & Jantzi, 2000). Hand in hand with high expectations for students, effective principals also have high expectations for staff; effective school leadership expect teachers to put student achievement before all else and focus time management toward instructional priorities (Nettles & Herrington, 2007). Hoy and Hannum (1997) refer to this high performance as collegial influence. Finally, professional development is an area that has been heavily researched and supported in that much of a principal’s success comes from the opportunities the principal provides for the staff (Dufour & Berkey, 1995; Lietner, 1994; Nettles & Herrington, 2007).

The leadership of the principal affects, either positively or negatively, the learning and working environment of students and teachers (Pepper & Thomas, 2002). Principal support influences the feelings teachers have about themselves and their work. Teachers characterizing principals as supportive (a) found work more rewarding (b) enjoyed a more productive and motivating work environment, (c) demonstrated lower turnover rates, and (d) experienced lower job-related stress and burn-out. The factors affected how successful their students were.

The principal has the power to establish and guide the positive progress of a school and develop and nurture relationships within the school community that impact the overall school climate (Day, 2000; Pepper & Thomas, 2002). The principal must establish an atmosphere of trust and camaraderie, as opposed to an atmosphere of competition and confrontation. Principals and teachers should interact in such a way that demonstrates mutual respect and caring; a relationship the students will witness and hopefully learn from.

Principal support is positively related to student achievement, and is key to effective learning. When teachers are supported by principals, they are more likely to take risks which will improve the quality of instructions in the classroom (Hoy & Hannum, 1998). In a study by
Stewart (2008) it was concluded that in school contexts where there was cooperation between the
principals and teachers, support for teachers, and clear expectations, higher levels of
achievement for students appeared in the classrooms. If the leadership of the principal is to have
any effect on student achievement, it must be linked to activities within the classroom that make
a difference in teaching and learning.

In schools where there is a strong instructional focus paired with a staff having shared
beliefs and values generates commitment. The shared learning culture produces teachers who
improve teaching and learning for students and are working toward the ultimate goal of
improving student achievement (Saphier, King, & D’Auria, 2006). The effective school leader
must facilitate and help professional relationships grow so that the academic culture can flourish
in schools and students can be successful.

Summary

While the trend in student achievement has been increasing in Ohio over the past several
years, there are students who are still not achieving at the proficient level (ODE, 2005). The core
of the problem is in developing highly effective teachers. Highly effective teachers, while
needing to meet the state’s definition, also must focus on effecting change within the classroom
if they are serious about raising student achievement (William, 2007). The most important
differences between the most effective classrooms in terms of student achievement is the teacher;
but the variable of concern is not what the teacher knows, rather it is what the teacher does. Once
teachers effect change at the classroom level, student achievement will increase because teachers
are at the most critical vantage point to influence change. While there are many ways teachers
can implement changes in student achievement, two ways the researcher focused on in the
literature included teaching style and the use of research-based best practices.
Teachers must use the most effective teaching style for the students in the class; teaching style has been shown to make a difference in learning (Opdenakker & Van Damme, 2007). Teachers must be able to determine when a student-centered or teacher-centered teaching style will work best and with what group of students each style will benefit the most in their learning goals.

Teachers must undertake research-based teaching practices to inform instructional practices. While the purpose of the literature review was not all inclusive of research-based practices, the practices covered gave the reader an idea of effective classroom strategies which improve classroom performance. Student achievement will increase when teachers begin to consistently apply research-based classroom practices such as differentiated and contextualized instruction (Rose & Myers, 2002), making connections to prior learning (Araz & Sungur, 2007), providing feedback for students (Brookhart, 2008), and using non-linguistic representations (Marzano et al., 2001) and data driven instruction (Cotton, 2003) effectively in the classroom.

In addition, teacher collaboration is a must for student achievement in the classroom (Rasberry & Mahajan, 2008). Teacher commitment and collegial learning account for 23% of the variation in school effectiveness and student outcomes on the state achievement test (Hord & Sommers, 2008); this is a critical argument in favor for the importance of professional learning communities and common planning times for teachers in schools.

While classroom level factors are one kind of variable affecting student achievement, school level factors also affect student achievement. Class size, school climate, and school leadership were the school level factors examined in the literature review. Historically, small class size has been shown to be linked to student achievement (Glass & Smith, 1979). However, class size data should be analyzed with caution; other factors may also be influencing student
achievement (Ehrenberg et al., 2001). Family and community factors may also be responsible for variations in student achievement. Controlling for the influence of other factors on student achievement when testing for class size can be done with true experimental research design. The Tennessee Student/Teacher Achievement Ratio (Project STAR) was the most notable experimental study conducted focusing on class size. The results from the study have been interpreted differently. Some researchers have said increased student achievement, improved teaching conditions, and improved student behaviors are a result of smaller class sizes (Finn & Achilles, 1999). On the other hand, other research (Hanushek, 1999) concludes class size alone does not increase student achievement.

Positive school climate has been found to be linked to increased student achievement as well (Benner et al., 2008). Climate can be defined in terms of school culture, school organization, and school mileu (Stewart, 2008), which encompasses many aspects of school structure and school life. Climate has been hard to define because of the many factors often categorized under the term (Hoy & Hannum, 1997); a clear definition is needed if an understanding is going to be reached about the relationship between school climate and student relationship is going to be found.

Finally, effective school leadership makes a difference in improving student achievement (Nettles & Herrington, 2007). Effective school leaders must be instructional leaders in the school. Principals must give feedback on effective instructional strategies, use data to inform decisions, and support teacher collaboration. Bring a transformational leader will help the principal be proactive and bring about necessary positive change. The instructional leader will always maintain an instructional focus with high expectations for both teachers and students, promoting the academic learning climate (Leithwood & Jantzi, 2000). Strong school leaders will
facilitate relationships to build trust with teachers and students focusing on the ultimate goals of increased student achievement.
CHAPTER III. METHODOLOGY

The study explored the relationship between classroom climate variables and student achievement. A sequential explanatory mixed methods research design was used. This chapter describes the research design, participants, variables, procedures for collecting data, and data analysis procedures.

Mixed Methods Research Design

Using the mixed methods research approach provides the researcher with the opportunity to capture the details of a situation and add depth and context to quantitative results. Mixed methods research approaches are beneficial because they allow the researcher to draw from the strengths of the quantitative approaches (i.e., the larger sample sizes, prediction, and generalizability) and qualitative approaches (i.e., description, depth, and conceptualized findings), and minimize the weakness of doing one-method studies (Johnson & Onweugbuluzie, 2004). Mixed method approaches are needed to extend and deepen understandings.

Gardner (2009) notes several strengths of mixed methods research. Mixed methods research (a) helps to clarify and explain relationships between variables, (b) allows researchers to explore the relationships in depth, and (c) can help to confirm or cross-validate relationships discovered between variables. A quantitative study can identify if relationships exist between variables, but doing a mixed methods study adds the qualitative piece to help the researcher understand why the relationships exist (Gardner, 2009).

In the study, an explanatory sequential design was utilized (see Figure 1). This two-phase design starts with the collection and analysis of quantitative data. The first phase is then followed by the collection and analysis of qualitative data. The second phase of the study is designed in such a way that it follows from or connects to the results from the first phase (Creswell & Clark,
The strengths of the explanatory study are that it is considered the most straightforward of the mixed methods designs. The explanatory method also has many advantages over other designs: (a) the two-phase structure allows for one kind of data collection at a time, so one researcher can implement the data collection as opposed to a team of researchers, (b) the final report can be written in two phases, making it both straightforward to write and easy for readers to read, and (c) the design can lead to multi-phase investigations, as well as single mixed methods studies (Creswell & Clark, 2007).

While there are many advantages to implementing an explanatory study, there are challenges to be aware of as well. The design does require time to implement, the qualitative phase often requiring more time than the quantitative phase. Researchers also need to decide whether or not to use the same individuals for both phases, to draw individuals from the same population for the two phases, or to use individuals from the same sample for both phases. The existing study used individuals drawn from the same population for the two phases.

![Figure 1](image-url)  
*Figure 1. Explanatory Design is the two-phase design structure starting with the collection and analysis of quantitative data, followed by the collection and analysis of qualitative data.*

The results of the sequential explanatory study allowed the researcher to discover if relationships exist among the variables (Gardner, 2009). Specifically, in the quantitative analysis, the researcher examined the relationship between student achievement and several classroom climate variables. The qualitative piece of the study allowed the researcher to add depth to this
variable by asking specific interview questions about teacher practices and their affect on student achievement. The researcher also added context to the study by having the opportunity to ask teachers how they are able to increase student achievement if that is what the quantitative data showed, or what challenges they face in their classrooms on a day to day basis that may be reflected in the data, that the researcher would not otherwise be knowledgeable about. The researcher was able to gather information about what happens in the classrooms of effective teachers. Therefore, the mixed methods design added more depth and conceptualized the findings more than a quantitative design alone could have.

Research Questions

The following research questions were addressed by this study:

1) To what degree do the following classroom climate variables relate?
   a) Class Grade Average (student achievement)
   b) Number of Postings on Progress Book (homework)
   c) Number of Assignments per Course
   d) Class Size
   e) Number of Students on Individual Education Plans (IEPS)
   f) Number of Class Removals per Course

2) Does a difference exist in student achievement between the following groups?
   a) High/low Postings on Progress Book (homework)
   b) High/low Number of Course Assignments
   c) High/low number or Class Removals
   d) High/low number Students on an IEP
3) How do effective teachers engage student learners to facilitate student learning and decrease office referrals?

4) What are teachers’ perceptions of the amount of support received from the principal?

**Quantitative Strand**

The research design for phase I, the quantitative strand, was correlational because the intent was to explore the relationship between variables. The intent was not to examine cause and effect, but to determine the relationships existing between classroom climate variables and student achievement. The researcher used data extracted from Progress Book, a web-based software application and Discipline Tracker, a computer generated discipline referral program. The participants in the quantitative strand of the study included approximately 121 teachers from the junior high and high school of a Northwest Ohio school district.

**Data Collection**

The data for the quantitative strand were downloaded from Progress Book database. Data from 121 junior high and high school teachers in a Northwest Ohio school district teaching a total of 615 courses were utilized. Data were also obtained from Discipline Tracker, the behavior tracking software that the school district utilizes at the high school level. At the junior high level, the administrators provided the researcher with hard copy data of the number of office referrals each teacher had for the nine-week time period of time analyzed.

The researcher was given administrator access to the teachers’ on-line Progress Book grade book site and accessed the following information with the district’s consent (see Appendices A and B: (a) the Number of Postings to the web on Progress Book, (b) the total Number of Students on an IEP in each course, (c) the Class Size, (d) the Number of Assignments
given in each class, and (e) the Class Grade Average. The researcher also accessed the number of Class Removals from the Discipline Tracker software at the high school level. The data were combined in a simple Excel spreadsheet, and then transferred to SPSS for statistical analysis.

Data were received from the district technology coordinator and the regional NOECA service provider. The researcher gave them the list of required information and they provided the information in an Excel spreadsheet. Data were then transferred from the spreadsheet to SPSS for statistical analysis at the course level. Unlike the course data, the district did not maintain class removal data by teacher and period; instead, class removal data were only recorded for each teacher as a whole. Therefore a separate statistical analysis was conducted. The teachers were each coded with a number and then the number of class removals was analyzed after putting the coded teacher with the courses he or she taught.

**Data Analysis**

Data screening led to the elimination of all courses with zero Class Grade Averages. The courses with zero Class Grade Averages can be described as non-academic study halls, academic preparation, lunch, case management, work release, and aide positions. However, there were academic courses (e.g., business management, physical education, and science) that had zero Class Grade Averages that were eliminated as well. A total of 304 courses were eliminated; leaving a total of 615 courses analyzed. Descriptive statistics, including the means and standard deviations were used to summarize, organize and identify trends in the data. To address the first research question a correlation matrix was created to identify the relationships among the variables. For the second research question, t-tests of independent samples were conducted to examine group differences in student achievement. Research questions 3 and 4 are addressed in the qualitative section of this chapter.
**Threats to Internal Validity**

Internal validity refers to the extent to which the results obtained in the study are a measure of the variables that were analyzed and manipulated in the study (Fraenkel & Wallen, 2006). Possible threats to internal validity in the current study include subject characteristics and location.

The selection of individuals for a study may result in the individuals or groups differing from each other in unintentional ways that are related to the variables being studied. This is referred to as a subject characteristic threat. In studies that compare group differences, variables such as age, gender, or socioeconomic status, may negate whatever group differences exist. In the district studied, students are assigned to classes in the high school based on the credits needed for graduation and scheduling desires the students have made known to the guidance department. At the junior high level, students are scheduled for classes based on district curriculum maps and achievement test scores.

**Qualitative Strand**

The research design for phase II, the qualitative strand, was a multiple case study, because the intent was to explore classroom level and school level factors of student achievement in depth. From quantitative data, one teacher from each junior high and two teachers from the high school were selected to participate in a multiple case-study. Case study was selected because the researcher was interested in explaining what happens in classrooms and the differences which can be evident in student achievement within different classrooms. Through the data, the researcher identified what classroom level and school level characteristics help to facilitate and engage student learners (Ehrenberg et al., 2001; Land, 2000; William, 2007). The multiple case-study research design added depth to the findings.
Semi-structured interviews and class observation were conducted by the researcher. Interviews play a central role in data collection in case-study research (Creswell, 2007). Interviews with teachers were 30-45 minutes in duration. The interviews were taped, and the tapes were transcribed by outside transcriber and assessed by the researcher.

Semi-structured interview scripts (see Appendix D) were used to guide the researcher for consistent data collection (Yin, 2003). The interview questions for teachers focused on how teachers facilitate student engagement in the classroom to increase student achievement and decrease office referrals, as well as teachers’ perceptions of the support they receive from school leadership in their roles in increasing student achievement and decreasing office referrals. Questions were also asked regarding variables in the quantitative phase of the study.

Observations were also conducted to aid the researcher in thick description and transferability of the data. The researcher recorded descriptive field notes to describe the setting and events to share with others, and analyzed the notes to share thoughts, questions and interpretations of those events.

Participants

The participants for the qualitative phase were purposively selected by analyzing the data gathered in the quantitative phase of the purposed study. After the quantitative data analysis was run and the most effective teachers found from the data, those teachers were asked to participate in the study. The teachers were identified through the quantitative data based on a combination of factors. The first variable examined was the teacher’s class grade average; the teachers needed to have a mean class grade average of 75% or higher. The researcher analyzed the data blindly and eliminated all teachers with a mean class average below 75%. Next, the researcher analyzed the teacher’s number of postings on Progress Book; the teachers needed to have a mean number
The researcher analyzed the data blindly and eliminated all teachers who had zero postings to Progress Book. Next, the researcher analyzed the mean number of class removals; the teachers needed to have no more than ten removals during the time period studied. The researcher analyzed the data blindly and eliminated all teachers who had more than ten class removals. Next, the researcher analyzed the mean class size, teachers needed to have a mean class size outside the range of 15-20. The researcher analyzed the data blindly and eliminated the teachers with class size under or over those numbers. The researcher did not include the variables of number of assignments or number of students on an IEP because they varied so much. Finally, the researcher chose to include only core academic teachers in the study; non-academic, elective teachers were eliminated if they met any of the above stipulations. Once a list of teachers was crafted from each school, the names of the teachers were revealed and the researcher contacted them by email. The first choice teachers agreed to participate in the study. Since the studied district has two junior high schools, one teacher from each junior high was chosen. However, to be equal in the sampling of the population used, two teachers at the high school were selected.

Permission was received from the superintendent of the school district and the principals to conduct the interviews with the teachers (see Appendices A-B). Once permission was granted all potential interviewees were contacted by an email originating from the researcher. Once it was established the teacher was amenable to being part of the study (see Appendix C), a convenient time to conduct the interview was established through email or phone conversation.

Data Collection and Analysis

Data collection was conducted through observations and personal in-depth semi-structured interviews. Interviews were used to gather information to help the researcher
understand the complex interaction of variables within schools and classrooms to impact student achievement. Data collection began in April 2009 and ended in August 2009.

The interviews were tape recorded on a hand-held digital recorder and then transcribed by an outside transcriber. Observations were documented by field notes. The researcher used an observation checklist (See Appendix E) with research-based practices for consistency and to lessen researcher bias during observations. Line-by-line analysis of the data was conducted and themes were discovered. When going through the analysis, the researcher organized thoughts by the teacher’s background and teaching experience, the teacher’s use of instructional practices, the teacher’s behavior management skills, and the teacher’s perception of support from the building administrator.

A code book was kept that listed each code as it was created (see Appendix F). The code book described the code and what the code meant or what it referred to, and allowed the researcher to set boundaries for the code; meaning what should and should not have the code attached to it. The code book revealed the themes discovered in the observations and interviews of the four teachers.

**Trustworthiness and Credibility**

Qualitative research design does not adhere to the same sense of reliability and validity as quantitative research does (LeCompte & Goetz, 1982). The quantitative term internal reliability has been replaced with the term credibility in qualitative research; external validity has been replaced with the term transferability; reliability has been replaced with the term dependability; and objectivity has been replaced with the term confirmability (Lincoln & Guba, 1985).

To operationalize the term credibility, Creswell (2007) and Lincoln and Guba (1985), suggest using (a) prolonged engagement, (b) persistent observations, (c) triangulation, (d)
member checking, (e) thick description, and (f) member feedback. Prolonged engagement refers to being exposed to the subjects the researcher is studying for a certain length of time. Maykut and Morehouse (1994) suggest 90 to 120 minutes so that the researcher has enough time to draw conclusions from what the subjects are saying. In the existing study 45-60 minute interviews and 45-60 minutes observations will be done to accomplish this. Persistent observation refers to the ability of the researcher to build rapport with the subjects of the study; the researcher can use this to help perceive the culture of the school or classroom she is observing. Triangulation is a term used to describe using multiple sources of data (Creswell, 2007). In the current study, quantitative data, the interviews and observation with the teachers, and the teacher’s interactions with his or her students, are the multiple sources of data the researcher is using. Member checking refers to providing participants with copies of the data analysis. In the proposed study, participants will be given the opportunity to read their own transcribed interviews to ensure accuracy. Lincoln and Guba (1985) suggest using thick description to check for transferability; the researcher must be sure the description is comprehensive enough so others can compare their context to what they read. In the existing study, the researcher will use as much detail as possible and try to bring the reader to the setting to bring the element of a shared experience.

Validity in research is a component of the study consisting of strategies to rule out the threats (Maxwell, 2005). In qualitative research, the researcher must try to rule out the threats after research has already begun. A specific validity threat is bias. Researcher bias can be defined as the subjectivity of the researcher; the selection of data fitting the researcher’s existing theory and preconceptions (Miles & Huberman, 1994). It is impossible to remove researcher subjectivity, rather the researcher must explain the possible subjectivities and how they will be addressed in the study.
Personal biases and subjectivities present in the current study include the fact that the researcher has been a special education teacher for 15 years. Students in special education often are negatively stereotyped in school (e.g., others may think special education students are “stupid”). When in fact, the students may be able to achieve at the same levels as the general population, they just have different needs. It just may be that the teachers expect them to be behaving and learning the same way as everyone else; this may be the same faulty belief being applied to other students who are not achieving up to their potential. My subjectivity is that my special education lens clouds what may happen in the general education world; because I have been in special education for so long, differentiation (a research-based practice) is second nature to me. I assume that everyone would be doing it if it would help students. Also, when observing teacher’s classrooms for research-based practices, I can only look for what I know. This study is influenced by the practices that I have gained knowledge about and will be able to identify when I see them.

Another possible influence on the study is the participant’s possible reactions to the researcher. The researcher has been involved in a leadership committee with the district that has been about raising student achievement scores. Some of the participants may mistakenly think that this study is about the researcher’s work on the committee as opposed to an individual research study for a doctoral program although they will be given teacher-participant consent letters to sign. Given my personal subjectivities, I utilized my chair’s and methodologist’s feedback and criticism to help keep me on track to draw conclusions consistent with the data.

Summary

Teacher accountability has increased since the advent of No Child Left Behind and the Highly Qualified Teacher stipulations and the yearly assessments mandated by the federal
legislation. Teachers with the skills and leaders with instructional leadership behaviors are needed to ensure that students are able to demonstrate achievement in ways which the state will measure as successful. While many factors influence the achievement of students, the teacher is in the unique position to have the largest impact on student achievement (Lasley et al., 2006).

Studies have shown classroom level and school level factors having an impact on student achievement (Stewart, 2008; Vieno et al., 2005). There have not been any mixed methods studies examining the variables further. This mixed methods study used a correlational quantitative design to examine the relationship between classroom climate variables and student achievement. Then, the study utilized a multiple case study design to interview and observe teachers. The purpose of the interviews and observations was to examine the relationships found in the quantitative data in depth, specifically questioning the impact of the use of best practices on student achievement.
CHAPTER IV. QUANTITATIVE RESULTS

The purpose of the quantitative portion of this study was to examine the relationship between student achievement and several class climate variables during a nine-week grading period: (a) Postings on Progress Book (homework), (b) Number of Assignments, (c) Number of Students on an IEP, (d) Class Size, and (e) Class Removals. Data from Progress Book, a web-based grade book/communication system was analyzed to answer the quantitative research questions of the study. The chapter contains information of the sample relative to the descriptive statistics, results of the correlation analysis, and results of the $t$ tests of independent samples conducted for both the course data and teacher data that was analyzed.

Description of the Sample

The participants of the quantitative strand of the study included 121 teachers teaching a total of 615 courses from the junior high schools and high school of a Northwest Ohio school district, grades seven through twelve. Since class removal data were only available by teacher, a separate data set was created to examine this variable in relation to the other academic variables; thus creating two data sets to analyze, a course data set and a teacher data set. Descriptive statistics are presented for course data and teacher data.

Course Data

Courses with zero Class Grade Averages, which included courses such as study halls, academic labs, and aide positions (students assigned to assist guidance counselors, administrators, miscellaneous persons for a period they were assigned a study hall) were removed by the researcher. The total number of courses analyzed in the data set equaled 615. The data are representative of all core academic areas and elective classes.
The descriptive statistics for course data are presented in Table 1 and indicate a mean of 2.00, a standard deviation of 1.32, and a mode of 1.00 for Postings on Progress Book (homework). This indicates that there was not much variability across the population in the amount of Postings on Progress Book. The midpoint of the data set was 2.0 \((n=615)\), indicating that half of all teachers only posted to Progress Book one or two times per grading period. For the Number of Assignments given, there was a large variability; the mean was 27.38 with a standard deviation of 18.94. The median was 23.60 and the mode was 17.00. For the Number of Students on an Individualized Education Plan (IEP) the mean was 2.18 with a standard deviation of 3.09, with the most frequent Number of Students on an IEP in a class being zero \((n=615)\). With the median of the data set being 1.00 half of all courses had only zero or one student on an IEP in class. The Percent of Students on IEPs was similar. The mean was 21.05 with a standard deviation of 31.94, with the most frequent percent of students on an IEP again being zero \((n=615)\). A possible explanation for this mode is the way the students are scheduled in classes. General education students are scheduled on general education teacher’s class lists while special education students are scheduled on special education teacher’s class lists. However, the district does utilize the practice of inclusion. So, while in reality a class may have 29 students in actual seats, of both general and special education students with two teachers present, in Progress Book data the classes appear to be separated. The variability was a larger in the data analyzed for the Percent of Students on an IEP. The median was 6.25.

For the Class Size the mean was 14.57 with a standard deviation of 16.55. There were multiple modes for this variable, meaning that many Class Sizes occurred more than once. The mean Class Size of 11 was the smallest class size found in the data set.
Class Grade Average was the measure of student achievement in the study. For Class Grade Average the mean was 76.99 with a standard deviation of 16.55; this is a fairly large variability. The median Class Grade Average was 77.76. The most frequent Class Grade Average was a 100. There were five courses which had the score of 100 ($n=615$).

**Teacher Data**

Since class removal data were only available by teacher, a separate data set was created to examine this variable in relation to the other academic variables. The descriptive statistics in Table 2 for the teacher data indicate much higher variabilities overall for all variables with exception of Postings on Progress Book (homework) and Number of Students on IEPs. For Class Removals the mean was 5.84 with a standard deviation of 9.66, a median of 2.00, and a mode of 1.00. This indicates that more than half the teachers ($n=121$) removed a student to the office one or two times with the majority of teachers only removing a student once. The Posting to Progress Book (homework) data stayed fairly consistent from the course data, with the mean equaling 2.00 and the mode equaling 1.00; the median and standard deviation were different from the course data by just a few points.
### Table 2

*Descriptive Statistics for Teacher Data*

<table>
<thead>
<tr>
<th></th>
<th>Median</th>
<th>Mode</th>
<th>Mean</th>
<th>Standard Deviation</th>
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</thead>
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<td>1.00</td>
<td>5.84</td>
<td>9.66</td>
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<td>Homework</td>
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<td>1.00</td>
<td>2.00</td>
<td>1.54</td>
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<tr>
<td># of Assignments</td>
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<td>17.00</td>
<td>27.38</td>
<td>18.94</td>
</tr>
<tr>
<td># of IEP Students</td>
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<td>0.00</td>
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<td>2.51</td>
</tr>
<tr>
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<tr>
<td>Class Grade Average</td>
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<td>77.89</td>
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<td></td>
</tr>
</tbody>
</table>

The Number of Assignments teacher data were different from the course data by just a few points as well. The same is true for the Number of Students on an IEP. The data are consistent between the course data and the teacher data for the Percent of Students on an IEP in all areas except for the median which was 6.25 for the course data, but 12.89 for the teacher data. This indicates that half the courses ($n=615$) have at least 6.25 Percent of Students on an IEP, and half the teachers ($n=121$) have 12.89 percent of their class on an IEP. However, the mean ($M=23.73$ for the teacher data and $M=21.05$ for the course data) and standard deviation ($SD=28.85$ for the teacher data and $SD=31.94$ for the course data) were similar for both data sets. Again, the Class Size statistics were very similar for the teacher data as the course data for all areas measured.

For the Class Grade Average the mean was 77.89 for the teacher data, only .10 lower than the course data. The median for the Class Grade Average was 77.79, .03 lower than the course data. The standard deviation was 12.00, indicating a fair amount of variability between scores. There were multiple modes; the lowest most frequent score within the teacher data set was 48.44. However, this statistic is misleading because all 121 Class Grade Averages only occurred one time, so each score was actually a mode.
Academic Achievement Relationships

The first research question for this study examined the relationship between academic achievement (Class Grade Average) and several class climate variables. Pearson correlation coefficients were calculated to assess the relationship between the class grade average and each of the following variables: (a) Postings to Progress Book (homework), (b) Number of Assignments, (c) Number of Students on IEPs, and (d) Percent of Students on IEPs for the course data. A correlational analysis was repeated to assess the relationships between the Class Grade Average and each variable for the teacher data (adding the variable of Class Removals). Results are presented by each independent variable by course data and teacher data.

Course Data

Correlation coefficients for all course data variables are presented in Table 3. Results indicate that Class Grade Average is significantly negatively related to Postings on Progress Book (Homework), Number of Assignments, and Percent of IEP Students. These negative correlations indicate that as Class Grade Average increases the independent variables (Postings on Progress Book (Homework), Number of Assignments, and Percent of IEP Students) decrease. Class Grade Average is significantly positively related to Class Size. Number of Assignments and Percent of IEP Students generated the highest correlation coefficients. Although statistical significance was found, all correlation coefficients are extremely weak, which signifies limited practical significance. Number of IEP Students was not significantly related to Class Grade Average.
Table 3

*Correlation is significant at the .01 level (2-tailed)

Teacher Data

Correlation coefficients for all teacher data variables, with the inclusion of Class Removals, are presented in Table 4. The only variable significantly related to Class Grade Average was Percent of IEP Students; \( r(119) = -.178, p = .05, \) two-tailed. This negative correlation indicates that as Class Grade Average increases the Percent of IEP Students decreases. Since the size of this coefficient is weak, the relationship lacks practical significance. All remaining teacher variables were not significantly related to Class Grade Average.

Table 4

*Correlation is significant at the .05 level (2-tailed)
Student Achievement and Group Differences

The second research question examined how student achievement might be impacted by group differences in each of the variables: (a) Postings on Progress Book (homework), (b) Number of Assignments, (c) Number of Students on IEPs, (d) Percent of Students on IEPs, and (e) Class Size for the course data. The same variables were analyzed for the teacher data, only Class Removals were added. Because the question requires categorical delineation, each variable was renamed and new values were assigned (i.e., the variable of homework was given a low and a high value). Then a comparison of means was conducted for those variables in the groups with low values versus those with high values.

Course Data

The results of each of the t tests of independent samples can be found in Table 5. The researcher examined group differences based on the number of postings on Progress Book (Homework) and Class Grade Average. Two groups of courses were separated from the data by examining the histograms. The low group (n=478) included courses with postings to Progress Book between zero to ten times in a nine-week grading period and a high group (n= 41) included courses with postings to Progress Book 31 or more times in a nine week grading period. Results indicate that the low Homework group had significantly higher Class Grade Average than the high Homework group; t(193)= 2.862, p < .01, two- tailed, \( r^2 = .04 \). However, the effect size \( r^2 \), or the percentage of variance is extremely small, which indicates an effect of limited magnitude.
Table 5

High/Low Group Comparisons for Class Averages for Course Data

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
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<th>High</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td>t</td>
<td>p</td>
</tr>
<tr>
<td>Homework</td>
<td>475</td>
<td>78.02</td>
<td>16.77</td>
<td>41</td>
<td>70.34</td>
<td>12.51</td>
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<tr>
<td># of Assignments</td>
<td>143</td>
<td>82.10</td>
<td>13.49</td>
<td>52</td>
<td>72.18</td>
<td>16.91</td>
<td>4.23</td>
<td>&lt; .001</td>
</tr>
<tr>
<td># of IEP Students</td>
<td>445</td>
<td>77.58</td>
<td>0.84</td>
<td>32</td>
<td>74.56</td>
<td>10.40</td>
<td>0.95</td>
<td>.341</td>
</tr>
<tr>
<td>% of IEP Students</td>
<td>451</td>
<td>77.84</td>
<td>17.11</td>
<td>101</td>
<td>71.67</td>
<td>15.27</td>
<td>3.38</td>
<td>.001</td>
</tr>
</tbody>
</table>

The researcher examined group differences based upon the Number of Assignments on Class Grade Average. Assignment groups were created by analyzing the histogram. The low group \((n=143)\) included courses in which 1-15 assignments were given in a nine week grading period; the high group \((n=52)\) included courses in which more than 60 assignments given in a nine weeks grading period. The low Number of Assignments group had a significantly higher Class Grade Average than the high Number of Assignments group; \(t(193)= 4.234, p < .001\), two-tailed, \(r^2= .08\). Again the effect size indicates a small effect.

The researcher examined the group differences based upon of the Percentage of Students on IEPs in the general education classroom on Class Grade Average. Groups were created by examining the histogram. The low group \((n=451)\) included classes with 0-20% students on IEPs and the high group \((n=104)\) included courses with 50% or more of the students on IEPs. The lower Percent of Student on an IEP group had significantly higher Class Grade Average than courses with a high percent of IEP students; \(t(553)=3.38, p < .001\), two-tailed, \(r^2= .02\).

Teacher Data

The results of each of the \(t\) tests of independent samples are presented in Table 6. The researcher examined group differences based on the Percentage of Students on IEPs in the general education classroom on the Class Grade Average. Groups were created by examining the histograms. The low group \((n=47)\) included classes with one to nine percent of students on
IEPs and the high group ($n=26$) included classes with 30% or more of students on IEPs. The low Percent of Students on an IEP group had significantly higher Class Grade Average than teachers with a high Percent of Students on an IEP; $t(71)= 2.34, p = .022$, two-tailed, $r^2= .07$. However, the effect size was minimal. No group differences existed for the other teacher variables analyzed.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th></th>
<th></th>
<th>High</th>
<th></th>
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<td></td>
<td>$n$</td>
<td>$M$</td>
<td>$SD$</td>
<td>$n$</td>
<td>$M$</td>
<td>$SD$</td>
<td>$t$</td>
<td>$p$</td>
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<tr>
<td>Homework</td>
<td>11</td>
<td>1.72</td>
<td>.46</td>
<td>8</td>
<td>1.88</td>
<td>.35</td>
<td>-1.750</td>
<td>.0464</td>
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<td># of Assignments</td>
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<td>80.76</td>
<td>9.98</td>
<td>18</td>
<td>80.99</td>
<td>17.68</td>
<td>-0.065</td>
<td>.948</td>
<td></td>
</tr>
<tr>
<td># of IEP students</td>
<td>59</td>
<td>77.07</td>
<td>11.72</td>
<td>24</td>
<td>77.32</td>
<td>10.40</td>
<td>-0.888</td>
<td>.930</td>
<td></td>
</tr>
<tr>
<td>% of IEP Students</td>
<td>47</td>
<td>80.97</td>
<td>11.74</td>
<td>26</td>
<td>74.08</td>
<td>12.54</td>
<td>2.34</td>
<td>.022</td>
<td></td>
</tr>
<tr>
<td>Class Size</td>
<td>19</td>
<td>73.70</td>
<td>10.49</td>
<td>13</td>
<td>81.30</td>
<td>7.98</td>
<td>-2.21</td>
<td>.035</td>
<td></td>
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<tr>
<td>Class Removals</td>
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<td>79.10</td>
<td>11.48</td>
<td>23</td>
<td>75.90</td>
<td>13.91</td>
<td>1.11</td>
<td>.271</td>
<td></td>
</tr>
</tbody>
</table>

Summary

Analysis of the course data revealed significant negative correlations of Class Grade Average with Postings on Progress Book (homework), Number of Assignments, and Percent of Students on an IEP. Additionally, a significant positive correlation between Class Grade Average and Class Size was also found. When the teacher data set was analyzed, a significant negative correlation between Class Grade Average and the Percent of Students on an IEP was established. It should be noted that while significance was found, the correlation coefficients were weak and indicate limited practical significance.

Differences in the course data for Class Grade Average were found to be significant in groups (low/high) based upon Postings in Progress Book (homework), Number of Assignments, and the Percent of IEP Students. Group differences in Class Grade Average were significant in the teacher data for the categorical variable of Percent of Students on an IEP. In Chapter VI,
these results are reviewed in conjunction with the qualitative results as well as implications for practice and research for educators.
CHAPTER V. QUALITATIVE RESULTS

Introduction

The purpose of the qualitative phase of the study was to explore classroom level and school level factors of student achievement in depth. Specifically, the researcher investigated the instructional techniques effective teachers use to engage student learners, facilitate student achievement, and decrease class removals. The researcher investigated how each teacher exhibited his or her effectiveness by examining his or her use of best practices in the classroom. The researcher also explored the perception teachers have of administrators as instructional leaders. Four case studies are presented and an analysis of the data generated by the participants is presented. This chapter provides the reader with a detailed description of the setting and introduces each of the four effective teachers who participated in the qualitative phase of the study. The chapter provides an in-depth review of the themes revealed from the teacher observations and interviews. A group synthesis is presented to identify common themes and identify differences between teachers. The qualitative research questions are also addressed.

Setting

The study was conducted in a Northwest Ohio school district. The district encompasses 10 square miles and has an enrollment of 3,800 students. Additionally, 64.7% of the population is economically disadvantaged and 51.2% of the district’s population is of minority status (ODE, 2008b). The high school and two junior high schools together employ over 170 certificated teachers with varying amounts of teaching experience and advanced degrees. The students attending the schools can participate in over 40 extracurricular activities and sports. The Ohio Department of Education recently classified the high school in the studied district as a school in “continuous improvement” in the 2007-2008 school year, but as “effective” the two previous
school years. (The 2003-04 Local Report Card was the first to rate schools based on the higher of the percentage of report card indicators met or the performance index score and whether the AYP goals were met for the year. The ratings are Excellent, Effective, Continuous Improvement, Academic Watch or Academic Emergency.) One of the junior high schools included in the study was classified as “effective” in the 2007-2008 school year, but in “academic watch” the 2006-2007 school year, and in “continuous improvement” the previous year. The other junior high school was classified as being in “continuous improvement” for the 2007-2008, 2006-2007, and 2005-2006 school years. Three years are important to mention so that trends can be noticed; one year does not give a clear enough picture of the efforts a district makes to improve performance.

The observations were conducted during the researcher’s planning period. The researcher arrived at some classes while class was already in progress. Arrangements were made beforehand with the teacher that the researcher would come into the class and sit in the back of the classroom for the observation. Teacher interviews were conducted in the teacher’s classrooms during his or her planning periods or after school. One interview occurred after the close of school for the summer.

Case Studies

This section relates the case studies of four effective teachers chosen to participate in the qualitative phase of the present study. Each participant was given an alias to protect his or her identity. The case studies will be presented with a profile, case description, and an analysis of the themes which unfolded during the teacher observation and interviews. The profile provides brief background information on the teacher including the teacher content area and experience as well as what led them into his or her teaching career. The case description provides details from the class observation and interview about the instructional techniques, behavior management,
support received from the principal. The analysis section summarizes the case descriptions section by bringing out the important instructional techniques, behavioral techniques, and perceptions of administrative support emerging during the interview.

The participants were identified based on a combination of quantitative factors (see Chapter III). Class average, the number of postings on Progress Book, the number of office removals, and class size were all taken into consideration when identifying teachers to participate in the qualitative phase. The teachers needed to be core academic subject area teachers as well. Once the teachers were identified for possible participation, the resulting two teachers at the junior high, and the resulting five teachers at the high school were asked in the order they were recorded when analyzing the data. The first teachers asked from each school agreed to participate in the study.

Mrs. Jackson

“My goals are for students to foster a desire for lifelong learning, provide them with critical thinking skills, and allow them to develop a love for living things.”

(Mrs. Jackson)

Profile

Mrs. Jackson is a science teacher at the high school. She earned a degree in Biology Education and a Master’s Degree in the Art of Teaching. She has been teaching for the district for 17 years. She has also been employed by the Ohio Division of Wildlife. She is a teacher leader in the school as she is the head of the Science Department. She is also a member of the Building Focus Team. The Building Focus Team is a team of people chosen by the building principal as exemplary role models who will serve to facilitate the district’s improvement plan within their individual building by creating building goals parallel to those of the district.
Mrs. Jackson does a mix of laboratory experiments, notes, and class discussion activities in her classroom. She explains that her students this year, “All get along real well in class so we can do things as a class. They respond real well to where we can talk back and forth without it interrupting into chaos.” She continues that her students seem to enjoy discussions more than they like labs, and even as they do notes they “discuss things as they go, they enjoy it that so that it doesn’t seem so tedious”. She described her students as, “being interested in hearing what everyone else has to say and the questions that are asked.” She also continued:

I think it’s just dynamic because there are a lot of friends and they all get along real well and they don’t feel threatened by any particular person in the class. Like if they ask a question, they would be made to feel stupid, or anything like that.

Mrs. Jackson stated that she set the expectation from the beginning of the year; she would not tolerate students making each other feel stupid from asking questions and therefore that is why they do not do it in her classroom.

Mrs. Jackson says that she was drawn to teaching because she enjoys interacting with children and her peers. Her favorite thing about teaching is that every day is different.

Within the quantitative data analyzed, Mrs. Jackson’s overall mean class average identified was 75%. Her mean posting to Progress Book average was calculated as 1.25, and she had no removals to the office during the time period studied; her mean class size was 18.25.

Case Description

Upon entering Mrs. Jackson’s classroom, class was started right away. There was an air of order about the room. This was immediately verified when a fire drill occurred. No instructions were given; all students simply got up and went where they were supposed to without a word. In fact, the students were very quiet for the duration of the fire drill. This
portrays a certain amount of respect for the rules of the school and for the teacher. It also shows that the expectation of orderliness and silence for a fire drill has been set from someone at some point during the school year, whether it has been from this teacher or another teacher cannot be determined. Mrs. Jackson provided 20 minutes at the end of the period for students to work ahead on their next assignment. However, few students took the time to work on the assignment and instead took the time to talk to each other or to her. This routine has enabled her to establish rapport with her students. She has connected with them on a personal level. Students were speaking to her about college life.

The atmosphere of the room was very science-like with specimens in cabinets around the room, a human skeleton on display, and a live turtle in a tank on the windowsill. There were two other empty tanks on the sill as well. There was an eye chart on the wall, and it appeared as if during the school year Mrs. Jackson normally wrote the assignments for each period on the board for the students. The students were sitting in chairs behind lab tables. Now that it was so close to the end of the school year, and they were reviewing for the final exam, there were no assignments written on the board.

I observed Mrs. Jackson lead a teacher-directed lesson in an advanced science class where she had notes on the smartboard and students were expected to write them on study guides as she reviewed them. The material she was reviewing was going to be on a comprehensive final exam at the end of the year. She moved through the material very quickly, with students, asking, “Wait, where are we?” or commenting, “Wait, I have a question”. The students had inquisitive questions to ask. My perception was that Mrs. Jackson felt the need to cover the material as fast as she could. Most students appeared to be engaged in the activity by either taking notes or at
least listening. One of the eight students in class had his head down on the desk. When asked if that happens often and what she does, Mrs. Jackson replied:

Yes [It happens often]. I feel that that is their choice and I will talk to them about it. But if they continue to do that, they are choosing to fail my class. They are choosing to fail. When asked about other behavior problems seen in her class, Mrs. Jackson cited talking out and socializing as concerns to her; they are all very talkative and social. She also says she sees “cell phone usage, cussing, not staying on task, and a lot of immature behavior from college prep students.” Her response to the misbehavior was:

Cell phones, depending on what they are doing with the cell phones, it may be a warning. Because of these tables, I can’t always see what they are doing, so, if they are sitting like this and I keep see them looking down, I’ll give a warning, “Put your cell phones away,” or “What are you doing behind that desk?” Because a lot of the times, by the time I would walk around to see what they are doing, they are gone. So just to let them know I know there’s something going on under the table. If I see them, I take them.

For disciplining other misbehaviors in the classroom the following exchange took place:

**Interviewer:** What about the talking and immature behavior?

**Mrs. Jackson:** I just redirect them to get back on task.

**Interviewer:** Do you typically do that from the front of the room or do you walk around?

**Mrs. Jackson:** I walk to them.

**Interviewer:** So they know exactly who you’re talking to?

**Mrs. Jackson:** No, no - I can hear what they are talking about which a lot of times shuts them down.
Mrs. Jackson could only think of two times when she had actually removed a student to the office. When she removed students to the office it was for unsafe lab practices, which she described as, “when the kids are doing a lab and somebody throws something” for example. Mrs. Jackson also reported, “Disrespect gets them out. But I don’t really have problems like that.” Mrs. Jackson defined disrespect as, “Name calling, swearing or that type of thing to other students or me.”

I did not observe research-based teaching practices being utilized in the one classroom period I observed. When questioned about the use of research-based practices, Mrs. Jackson stated she uses “note taking and graphic organizers from time to time.” She teaches primarily from her smartboard projector directing knowledge to her students through guided notes. In lab experiments, the knowledge students gain is through hands-on activities. When asked what specific teaching behaviors she demonstrates in class to help her students reach the learning goals that she set in class, Mrs. Jackson said:

Practice. I try to do one-on-one with them but my college prep class is really large this year. I have 25 in there so it’s difficult to get around to everybody when they are doing their practice and homework but I try with that. Luckily this year with my college prep-they all get along real well in that class so we can do things as a class and talk about things as a class, which I haven’t had a lot of in the past. They respond real well to that where we can talk back and forth with each other without it interrupting into chaos.

Mrs. Jackson uses a direct teaching strategy with facilitation incorporated in it as well. She spoke of group discussion and talking back forth many times as a teaching strategy. However, in the class I observed when the students were asking questions and trying to discuss the items on the notes, Mrs. Jackson was moving through the material very quickly and did not take the time
to answer the student’s questions. I am inclined to believe she reviewed quickly because of the
time constraints put on her to review the material for the advanced placement class’s final exam.

Providing feedback is an important research-based strategy to use in the classroom. Mrs. Jackson
grades papers and hands them back to her students on a regular basis. The following
exchange occurred:

*Interviewer:* How do you provide feedback to your students? Do you hand back all the
papers that they do? Do you ever worry about cheating?

*Mrs. Jackson:* In the College Prep Class, not really. I mean, I know copying goes on as
far as, you know, somebody gets a work sheet and copies down some of the answers, but
 cheating on tests, no. AP, yes, cheating. Very much so.

*Interviewer:* So do you hand back papers or do you provide feedback in other ways?

*Mrs. Jackson:* Typically what I do is that I collect their papers, I grade them so my marks
are all over, then I hand it back so they know I looked at it. If I see multiple papers
[papers that are identical in nature that appear to be copied or cheating is taking place],
they don’t get credit for it. Things like that.

*Interviewer:* And does that discourage the cheating?

*Mrs. Jackson:* No, some don’t. No, some truly don’t care. It’s all about getting that
 paper done and hoping that I don’t look at it.

*Interviewer:* Would you say that they are learning? or are they just getting the grade?

*Mrs. Jackson:* They’re trying to get the grade.

*Interviewer:* Even in an AP class?

*Mrs. Jackson:* Yes, very discouraging.
The type of feedback Mrs. Jackson is providing to her students is summative feedback, and it is what teachers are most used to giving to their students: grades for work they have done. While Mrs. Jackson verbalizes that she is discouraged about her students “just trying to get the grade”, she did not offer ways she motivated students get past that. Mrs. Jackson did offer that when students are caught cheating they will not get credit for the assignment. The research-based practice of providing feedback is not only about providing summative feedback, but also formative feedback to students. Formative feedback was not observed or discussed by Mrs. Jackson.

When asked how she would differentiate instruction for any of her students that might be higher or lower functioning in her classroom, Mrs. Jackson responded with the following answer:

The only place that would really occur would be in the college prep class. I do have some students that are off the charts, should be in honors, and then I have some that are barely scraping by. I tend to teach more towards the middle students, and then those students who need extra help I try to be there for them. Unfortunately, a lot of the upper students lose interest because they aren’t challenged enough, but then again, they don’t want to be challenged is what I find. I try to give them a little extra “this” or “take a look at that” or…they’re really not into that, they’d rather just sit there and say, “I’m done.”

So I think differentiating is very difficult in a situation like that.

I was getting a little confused as far as the levels of the classes; Mrs. Jackson clarified for me in the following exchange:

*Mrs. Jackson:* Honors, as far as the Sophomore Biology class, Honors would be the top level. And then from there, they would go on to AP.
Interviewer: And then college prep?

Mrs. Jackson: Is just your basic level. And then we have a lower one who goes who just needs a credit. And that would be called a General Bio. I guess that’s how we differentiate. I guess that’s not really supposed to be considered differentiating, but…

Differentiation is teaching to students’ individual levels for maximum student success. Course levels do not reach this goal, and Mrs. Jackson does admit that the course levels are not true differentiation.

The use of Progress Book to post assignments and other miscellaneous communications is a way to communicate with students outside of the classroom. Mrs. Jackson states how she uses Progress Book:

I have web pages for my class so they can go up and see assignments that are…especially for AP. Links are there to other sites that they can use as resources. From time to time I’ll put the notes up there. New materials. Yes, I use that a lot. I put [up] homework.

When asked if she thought it was helpful for her students, she thought, “some students use it a lot and some students could care less.” She felt that the college prep kids really liked to see the reviews that were posted; but when referring to her AP classes replied, “I had a bunch of review materials up there for their AP exams, and I don’t really know if any of them looked at it.” Mrs. Jackson uses Progress Book on a regular basis. During the school year, the only way of knowing if the students are utilizing the school-home communication piece is through conversation. Mrs. Jackson reports she “really didn’t know if any one looked at it” when she posted review notes.

When asked about student achievement problems, Mrs. Jackson felt that students lacked work ethic. She lamented:
My biggest problem is my AP [Advanced Placement] class. They are supposed to be the “top notch” students and they don’t have any work ethic. They want everything given to them, a lot of whining, a lot of complaining that I don’t hear from the college prep students.

When asked how she tries to instill a work ethic into her students, she answered:

Of course I threaten with college, because they are college bound students. But typically, they don’t get it. They just think that things will continue as they have been. College is going to be a big party, and you know that I’m crazy, that that’s not going to happen in college and, you know, “I won’t have to take notes in college” or “I won’t ever have a test over multiple chapters in college.”

Mrs. Jackson believes that her students have the ability to perform better than they do. By the end of the year she sees that seniors have already been accepted into colleges, some have already taken their AP tests and now they can “skate” through the rest of the year. Mrs. Jackson adds that she does not see this problem with all of her students though. Her college prep students “work hard right up until the end of the year.”

As far as student achievement gains, she stated she wanted to ignore the advanced placement students on that question and talked about her college prep classes:

I see a lot of maturity. They come in as freshman, still. By this time of the year, I’ve seen a great change in their behaviors. They may not academically achieve really well based on where they are academically, but as far as behavior and their work ethic, I think that really improves over the year that I have them.
This response did not indicate that Mrs. Jackson really had a feel of the academic gains she really wanted to see in her students as the year progressed; the answer was vague and focused more on student behavior than student academic achievement.

My next question for Mrs. Jackson focused on her expectations from the principal as an instructional leader. Mrs. Jackson had quite a bit to say on the topic:

As a principal, I would expect him to have a handle on what all of us are doing so that we all know and stay on the same page and we’re all working toward the same goals and making sure we’re heading in the content standards so kind of overseeing our department and making sure that we’re doing what we’re supposed to be doing and staying on track. Supporting us and being able to have professional development and things that would help us help our students. I would say that’s what I would expect from him making sure everyone is on the same page and that we have the opportunity for professional development. I would like to see more interaction between us and the lower grades because we have no idea what these kids are coming in with. I mean we can look at the content standards and see what they are supposed to be getting in kindergarten and first grade, but we have never, ever, sat down with elementary teachers to talk about what they are actually doing or how we can help them, what resources can we give them, what little tricks do they have that would help our high school students, we get none of that.

I asked Mrs. Jackson if she did in fact receive the support that she expected and she replied, “He’s doing what I expect him to do.” She also commented that she thought he was wonderful.

When asked about the assistant principal’s role, she said, “They really don’t get involved with our academics other than doing our evaluations.” However, the assistant principal plays a large role in discipline and she felt that she would like to see them be more consistent:
More consistency in their consequences that they hand out; making sure that the consequences are fair for what the student did wrong; and I would like to have more input in the discipline – especially if it’s a teacher-student situation where there may have been words between a student and teacher, or something like that, I would like to be more involved in that process because it always comes down to he-said-she-said and who do you believe. We’re not really involved in that process.

Mrs. Jackson described the inconsistency between assistant principals as a problem of lack of communication. She talked about the unsafe lab practices example that would warrant a class removal from her:

For example, if a student, if you have two students, like I said with the “unsafe lab practice” that they get “tossed” for, the two students are working together, they do something unsafe, I throw them out – they have two different assistant principals. One assistant principal may understand the severity of what they did, the other may not. And so, one student may get a harsher punishment than the other student. One may get Saturday School or BIA [in-school suspension] and the other might get Saturday School. The in-school suspension is the harsher punishment because the student would be out of class for three days. Mrs. Jackson would like to see the assistant principals get together in a situation like this and decide the best consequence for both students, although she realizes it probably does not happen because of time constraints. At the very least she wishes she would be able to have some input; she comments, “maybe they could come talk to me and see “How bad was it?” or “What would you like to see happen?” I asked Mrs. Jackson what kind of support she felt she received from the assistant principal to help her with discipline, and she felt she received a “moderate”
level of support because “a lot of times if you go down to them and talk to them and make them understand what led up to it, then there is an understanding there.”

Analysis

Mrs. Jackson is a motivated teacher who uses personal time to further her education. She also uses her own time to attend workshops and seminars to learn about resources that will ultimately help her students. She spends time inputting class notes into Progress Book, and adding links for students to use as resources. She does this not even knowing if students will be using the Progress Book as a tool for their learning.

Mrs. Jackson uses a teacher-centered teaching style the majority of the time in her lessons, although she does incorporate hands-on laboratory experiments as the curriculum calls for them. She enjoys facilitating group discussion into her lessons and talks about employing this instructional strategy often in her classroom. Mrs. Jackson’s students appear to be engaged in the class material on the surface level. However, after questioning Mrs. Jackson she confirmed that her higher level students do not seem to have the inner motivation to learn the material; they just want to get the work done and earn the grade. While this seems to trouble Mrs. Jackson she did not offer instructional strategies used to motivate her students to do better in class.

Mrs. Jackson named note taking and graphic organizers as the research-based strategies she uses from time to time in her classroom. She uses practice in her lower level classes to reinforce skills her students need to learn. While Mrs. Jackson uses summative feedback by grading all assignments and returning them to the students, she does not use formative feedback in her class. She does mention differentiation; however, she states that is difficult to do. She comments that she thought it should only be occurring on her lower level classes. Mrs. Jackson was quick to note the achievement problems that her students exhibited in class, but when asked
to articulate the achievement gains she hoped to have her students show in a year, she had more trouble putting the academic gains into words. I have the feeling that Mrs. Jackson has high expectations for her students yet if the student doesn’t put forth the effort in her class, Mrs. Jackson will make an effort to talk to them; but if that doesn’t work, Mrs. Jackson does not appear to have a bag of tricks at her disposal to motivate her students to do better.

Mrs. Jackson has few behavior problems in her classroom. She prefers to handle any problems that occur in her classroom. She was able to converse about behavior management skills and would only send a student out of the room for safety reasons. If she did have to send a student to the office she would expect consistent consequences from the assistant principal. I observed good rapport from her with her students. She was able to connect with them on a personal level by having time at the end of the period to talk with them. Mrs. Jackson needs to take advantage of the rapport she has been able to build with her students and use it to help motivate her students academically.

Mrs. Jackson feels she receives needed instructional support from her principal. She feels the principal’s main role in supporting her in the classroom is to make sure she is doing what she is supposed to be doing in the classroom and providing her with appropriate professional development opportunities.

Mrs. McDonald

Profile

“My goal is for them [my students] to be academically strong as well as to be socially and academically competent”

(Mrs. McDonald)
Mrs. McDonald is an African American English teacher at the high school. She received a Bachelor’s of Science degree in English and Secondary Education. Mrs. McDonald also pursued a minor in speech communication. She has been teaching for the district for 14 years. She also taught for one year in a district in Mississippi before coming to Ohio. When she began her teaching experience she taught special education instead of in her certification area. Mrs. McDonald stated, “special education helped me to think about functional skills, social skills, and I could see how that could be incorporated into lessons.” She also has continued her education receiving a Master’s Degree in Educational Leadership and her principalship for grades four through 12. She is an active member of the school community; she has been the Black History Chairperson at the high school for 5 years. She helps to organize events for the school celebrating African American heritage.

Mrs. McDonald shared that when she was between the ages of nine and 10 her parents divorced, and then two to three years later her grandparents fell ill. This caused her to grow up very fast; looking back she felt her hardest times were during her teenage years and because of this experience she had always wanted to have some kind of contact with teenagers to help them problem solve. She relayed the following story:

When I had gone to one of my counselors, it was more like “talking down” to me rather than just helping me. It was just “talking down” to me and I was an academically strong student.

Mrs. McDonald uses this experience to add a counseling touch with her students as well, she states:

I put that counseling touch in there with kids - knowing that they’re going to go through daily issues, knowing they’re going to go through frustration, and dealing with anger and
things like that. Teaching them to work with it because it’s natural. Teaching them how
to keep your self-esteem and how to feel good about themselves when they mess up and
things like that.

Mrs. McDonald uses a lot of contextualized instruction in her class, meaning that she draws on
real life experience that students can relate to as she teaches her lessons. She reports:

I’m trying to put real-life situations there, not just going through practices and different
exercises and worksheets. I really want them to see themselves interacting and changing
and improving the community.

When asked how the students respond to that she replied:

They really like it. They usually tell me, “You justify why you are a teacher. You make
sense. Usually we are told in most classes that we have to do this and we need to that and
take a test.” And when they see it’s beyond a test and they see it’s something they’re
going to apply in their life, then they’re more serious about it and it builds their self
esteem.

Mrs. McDonald has a very caring heart and provides emotional support to her students by
connecting with them on a personal level. Mrs. McDonald reports that her favorite thing about
teaching is her enjoyment in “seeing students and adults learn new things and use them to
improve the quality of their life.”

Within the quantitative data analyzed, Mrs. McDonald’s overall mean class average
identified was 92%. Her mean Progress Book posting was 2.0, and she had 6 removals to the
office. Her mean class size was 15.5.
Case Description

The first thing I felt when I entered Mrs. McDonald’s classroom was welcomed. Students were coming and going as they wanted, but it was with permission. There were pictures of students taped to the back wall that were taken by students in the photography class. Bottles of lotion and boxes of tissue were positioned strategically around the room for student use. Posters with the standards and motivational messages were posted around the room. Soft music was playing in the background. Assignments for the freshmen and sophomores were written on the side board. The broken clock was covered with a picture. The teacher was standing at a podium by the classroom door and was greeting each student with a smile as they entered the room.

When the 50 minute class started, a student asked to get a drink, and she walked around the back of the class so that she would not walk in the front of the class disturbing any of the students; the student even said “excuse me” as she walked by me. The teacher welcomed me by name and everyone said “hello” to me. The teacher started a very engaging lesson on imagery reminding the students of what they had discussed in previous lessons. The teacher used real life examples for the students to connect the material to. Mrs. McDonald asked the students if they ever loaned someone some money and that person told them they were going to pay them back on Saturday, but they never did. She asked them, “How did you feel?” The students started naming adjectives. In fact, Mrs. McDonald used several real life examples before even giving the assignment for the day. When she finally gave the assignment, she gave many directions, repeating them over and over for the students. She involved the students by asking them for examples to be sure they understood what they were being asked to do.

For the activity, the students smelled something that the teacher brought around for them and then they wrote down words that described the smell. Next, they wrote down any memories
that were tied to that smell. Before they started the teacher dimmed the lights and opened the
curtains, she made the atmosphere of the room just right. As she brought the smell to the
students, she would touch each of them on the shoulder and repeat the direction to them. The
students were very quiet, seeming to listen to the teacher’s every word; no students were off task;
there was no talking among students during my class observation. The teacher was also fully
engaged in her class instruction; she was never at her desk, she was moving around the room
giving feedback to her students continually. Some students worked faster than others, but Mrs.
McDonald allowed them to work at their own pace and did not in any way make them feel
rushed. She would tell the students, “great”, “that’s excellent”, or would laugh at something
humorous they wrote. She would also remind them of the purpose they were doing this, using
imagery to build a poem, many times over.

When switching to the next activity, using the sense of taste, she used the transition time
to give the students some encouragement, she told them, “You may not feel like you are writing,
but you are!” She continued to tell them that if they wanted to be personal in their writing they
could be, if not, that was fine too. She was giving her students an option they may not have even
considered. Writing can be hard for students, especially descriptive writing and using imagery.
Mrs. McDonald was trying to make it as accessible as she could for her students. For the next
activity students were able to choose a candy stick to describe the taste of. Again, Mrs.
McDonald was very repetitive with her directions and feedback. She roamed around the room
patiently as the students completed the task. The students again were very much on task with no
socializing or talking out. Volunteers shared their poems near the end of class before Mrs.
McDonald reviewed imagery one more time. She ended class with a reminder of a poem read in
class which she tied to a real life lesson.
When talking to Mrs. McDonald about this lesson she states that she uses it as a way to teach her students how to deal with stress especially at the end of the school year. She shares:

I use the poetry as a de-stresser. I know that through the literature, and the kids are required to read, but there are also so many opportunities for them to connect to part of their lives. There are some academic things they have to learn but in that, I try to make it enjoyable for them. The poetry unit, when you came in to observe the kids, was to de-stress at the end of the year, teaching how to de-stress, and things like that.

She continues that she wants to instill the choice to read in her students:

It can be a choice to read outside of class. It could be a choice to read because I experienced such relaxation or I experienced how to deal with business, how to write a business letter, how to be able to communicate with other people in a more professional way. With my freshman, it was the same thing, but I’m teaching them in Romeo and Juliet, how to date. We address in the Miracle Worker handicap etiquette. Just showing them how to live in an environment with people that are the same as them as well as different. Not seeing that there should be a level, but there should be respect and there should be a comfort in the things that they do. Writing a letter and responding to things, not feeling intimidated to write the principal a message or a note, or a letter; I like that about the OGT because it has a prompt in there for them to write a letter. If we want somebody to come into the school, or if they want something changed, to do some things - that they are able to state what they believe and prove it. Not feeling intimidated to do it.

Mrs. McDonald uses a large variety of contextualized instruction in her classroom. This was both observed and discussed with her. Her ability to bring in real life situations while instructing her
students brings in an effective dynamic which serves to grab student interest and make learning relevant to them. She stated that she “tries to address the whole person rather than just teaching English.” She talks to her students about budgets and managing money. She says that she thinks it is important because, “they’re getting to the age where they start working, in ninth and tenth grade, and how do they need to help out at home.” Mrs. McDonald conveyed that she addressed a lot of things in her class. The following exchange took place:

*Interviewer:* So many people/teachers might say there’s not enough time to talk about stuff like that. There are so many standards on these to teach; we need to focus on the OGT’s. How do you find time to address all of those areas?

*Mrs. McDonald:* That’s all in the standards. When we’re reading the literature, we’re dealing with problems. We are dealing with: how do I respond? how do I need to write appropriately? and also, how do I need to speak? Sometimes students’ tone, they come across too strong or talking slang, and let them know slang isn’t wrong, but in the environment, you have to be able to respond in different environments. The way you talk to your parents, make sure you’re comfortable with speaking the way they will feel respected; the way you talk to your teachers and principals a certain way and business people, like a job interview. The thing about it in the classroom is that they can be able to show and respect different things whether it’s the professional hat or if it be an unprofessional hat. How they talk to their friends is very laid back. How do I get to cover the grammar and literature? I’ll give you an example of a lesson on proper tense. I wrote a love letter, and I had errors in it. And in that love letter, they had to correct it. It was juicy; this guy had broken up with this girl and he regretted it and he wanted to get back with her. He saw her at the dance, he was telling her how good she looked, and this
guy she came with was like, she could do better than that and he doesn’t know how to treat you. The kids were able to get all into it. They were able to change the tense. I use things that they are interested in and that is how I address a lot of things that I do in here. She also connects to prior learning. Mrs. McDonald would make references to previous assignments and review that continually throughout the assignment. Providing feedback to her students seemed to come natural to her. Mrs. McDonald did this constantly as I watched her in her classroom. When talking about feedback, she commented:

Being able to praise – the praise is so important. Praise goes beyond a good job. Praise is, “Your hair looks good,” “You really have a way of coordinate your clothes,” and “I saw you in the mall the other day and your family seemed so loving.” It goes beyond praise on a sheet of paper.

Mrs. McDonald is very emotionally supportive of her students; our conversation seemed to focus more on that than grades or formative assessment of any kind. No differentiation was mentioned in the interview specifically, although I observed her differentiating a bit in her lesson when she allowed students to work at their own pace.

Mrs. McDonald uses Progress Book in a variety of ways to communicate with her students. She states that she uses it for posting, “homework, I put different links on there, study aides, resources, and I put my lesson plans on there.” When asked to be more specific about the links she has for her students to use, she elaborated:

We go through different units and I have lists of authors and poets. I don’t put the kids in a box; I put things, even things I won’t teach, may not have time to teach, they can click on it and go into it like Native American literature, poetry, women poetry, you know,
links that go beyond what I’m covering in class, backgrounds on the authors that we’re going to be covering, other works that could relate to similar to what we’re covering. She continued that she also posts information about her class rules and how she can be contacted. She states that the main rule posted on Progress Book is that her students need to respect one another:

That’s a big deal to me. If I see a kid that’s doing something detrimental to himself or something that’s negative and it takes away from them, I talk to them about it. I address it. I don’t ignore it. I think I have a view of the kids many people may not get that opportunity. I have an opportunity to see something developing and I need to address it.

Mrs. McDonald motivates her students to use the Progress Book links by doing a “commercial” for it. She says that she often hears her students comment, “You can go in and Mrs. McDonald even has the smart notes up there for us. All we have to do is click in…..” She likes to hear them talking about it.

Mrs. McDonald stated that she rarely has any behavioral problems from her students. She contributes her low class removals to gaining student respect:

My thing is that the first week of school is their respect. It’s not just them to respect me, but I need to respect them. So, I really try to find some background facts. I have some handouts that I’ve used. I ask them to fill it out. It’s about their family, fears, their happy moments, how do they learn, things they’re interested in, some of their highest goals, and what are some things (barriers) that keep them from accomplishing things they like to do. Then I look at all of that, I read that, and it helps me to address those things through the year.
If Mrs. McDonald were to remove a student from class and send him or her to the office, she reported that it would be for “physical harm or if another student is threatened”. Typically, Mrs. McDonald deals with most minor misbehavior herself; she says:

Usually if it’s just someone who is just talking to them or that kind of thing, either I put them in the back…talkers, I usually have them help to do things in class, verbal things. Kids who have problems sitting still, I have places where they don’t look conspicuous – they have lotion, hand sanitizer, Kleenex, if you need stapled papers, they can walk around or stand if they want to. Some kids just can’t sit still, and that’s ok with me.

Mrs. McDonald’s lessons are engaging with connections to prior learning and contextualized instruction. The students I observed were occupied with the lesson and seemed to be enjoying the activity presented to them. This could be a possible reason for the lack of office removals from Mrs. McDonald’s class as well as the rapport she has built with her students through mutual respect.

When asked about student achievement gains, Mrs. McDonald’s goal is for her students to be able “to master what they need to do at ninth grade level, or whatever grade level they’re in, but that they’re passing into the grade up or above.” Specifically her goals for her students are the following:

My goal is that academically for them to be able to, if you’re talking about specific things, is for them to write a mature small paragraph essay, for them to be able to speak in front of a group of people, maintain eye contact, good posture, an oral flow, know their alma matter, they know how to correct or proofread whatever they do, help someone else, teamwork, know how to research and cite information correctly, feel comfortable reading
and being able to handle a discussion with other people about it, and also look at children and people in the community and share with them.

When asked about achievement problems, she shared that she felt her biggest complaint was when, “kids come in, and they haven’t learned what they were supposed to learn at grade level.” She continues that she tends to get students who:

- can’t write sentences, write basic words, and that bothers me. Sometimes it makes my year more challenging, but that’s my goal, is to make them feel comfortable with their writing. I know this year, the biggest thing. There were two big issues this year. College preps don’t want to read. I don’t know why they don’t, they haven’t gotten that love for reading, that concerns me, and then, also, capitalizing at the beginning of a sentence. I didn’t understand that, and they don’t feel responsible for stuff. I should say three things. Those were three big things for me.

Mrs. McDonald is very upset by her student’s lack of responsibility for reading. She says that they “really hate to read.” She would like for them to “eventually appreciate reading through this course.” She has many goals for her students. She wants for her students to see through reading that “I’m supposed to get self-discipline. This is my life and experience, maybe I’ll have to manage a business and understand people from their perspective.” She believes that is how she tries to help her students mature both academically and as people.

Mrs. McDonald believes that the principal of the high school is a good principal. She feels that she needs to paint him a picture of what happens in the classroom since he’s not in there to see it. She thinks he needs to know what kinds of kids are in the classroom and what the issues are that the teachers are facing, specifically mentioning the reading issues and lack of basic skills. Mrs. McDonald feels that it is his job as an instructional leader to support her
endeavor to help address the student inefficiencies by letting her know of any programs that he might come across that would help her or her students. She continued:

Hopefully he could get some feedback for me with something I can do or programs that I can look into. Also, to support me in what I’m doing if it’s working.

Mrs. McDonald stated that she would meet spontaneously with the principal at least once a month, and also email him when she would have something to tell him about. She was concerned that the principals should be able to help teachers get the training that they need. Mrs. McDonald felt all of her meetings with the principal were positive in nature, unless she had a big concern to talk to him about. She would go to the principal so that “he knows what is going on in the classrooms with the grades so he is familiar with that class.” She reported that she gives feedback to the assistant principals as well.

Analysis

Mrs. McDonald is an extremely caring teacher who is emotionally connected to her students. She has had personal experiences that have encouraged her to see her students as people and not just English students. She is committed to spending time before and after school preparing quality lessons which make learning relevant to her students.

Mrs. McDonald uses a teacher-centered teaching style in her classroom with some student-centered projects throughout the year. While she uses a teacher-centered style, Mrs. McDonald encourages student involvement in class by asking for volunteers to share work and facilitating class discussions. She was observed and also reported that she uses contextualized instruction often in her classroom. She feels this instructional practice is the best way for students to retain knowledge and keep it in their long-term memory. Connections to prior
learning were also observed in her lesson. Mrs. McDonald is very aware of the abilities of her students and verbalizes the goals she has for her students quite articulately.

Mrs. McDonald was able to keep her students engaged throughout the lesson I observed in her classroom, even during times of transition. She was observed providing verbal feedback to all of her students as they were working, letting students know they were doing a good job or telling them what they needed to do if they were not. We did not have time to discuss what other types of feedback Mrs. McDonald provides to her students on a regular basis, but since she did state she felt that regular praise was important; Mrs. McDonald also provides frequent summative feedback on assignments given to her students. She was not necessarily observed differentiating the lesson for her students except for providing them with more time if needed on the assignment. This could be considered differentiation for slower workers; however we did not specifically discuss the idea of differentiation in the classroom.

Mrs. McDonald has very few office removals from her classroom. She is proactive in her classroom by talking to her students and getting to know her students on a personal level. She has developed a mutual respect with her students and this has kept her class removal number low. Her ability to keep her students engaged in real-life lessons contributes to the low number of behavior problems she has in her class as well.

Mrs. McDonald feels she receives instructional support from the principal. She feels she has a certain responsibility to let the principal know what happens in the classroom so that he is aware of student skill levels and issues; she feels this will allow him to support her better. Instructional leadership comes in the form of collaboration and this shows some collaboration in the area of instruction. Mrs. McDonald did not mention the principal collaborating with her in the areas of curriculum or assessment.
Mrs. Lawrence

Profile

“When I see student success through my efforts to be a better teacher, it makes all the work and challenging aspects of my job worth it!”

(Mrs. Lawrence)

Mrs. Lawrence is a math teacher at a junior high school. She has been teaching seventh grade for the district for twelve years. She has always taught for the district at the junior high stating, “I love this grade level. I don’t want to teach at any other grade level.” Mrs. Lawrence is very confident in her teaching ability, stating, “I feel very qualified in my training.” She has several degrees and certifications; a Bachelor of Science in Education with certification in elementary education and specific learning disabilities, a Master’s degree in curriculum and teaching, as well as a two-year license in Education Administration and Supervision for grades 4-12. She states, “I have no plans to pursue any other degree. I will take course work to renew my license in areas that will enhance and improve student learning.”

Mrs. Lawrence is on the junior high school’s Building Focus Team which she describes as “effort to promote building commitment to continuous improvement and high achievement and to support the Ohio Improvement Process for our district.” She is also the assistant coach for the 8th grade volleyball team. When she is not coaching, Mrs. Lawrence can be seen working middle school home events for wrestling, basketball, and track games.

Mrs. Lawrence spends a tremendous amount of time preparing lessons for her students, stating that she spends approximately two hours a day preparing quality lessons. She is committed to working during her lunch period. When describing her working lunch period she
mused, “I love it. I get so much done. It’s so quiet. I’ll put my story on sometimes. I feel like I get that extra time.” She states that changes in the schedule for next year mean:

I’ll only have a 45 minute planning period to grade, put grades in, do lesson plans. . . So, you know, I’m trying to tie in career awareness, I’m trying to tie in reading and math; you know, I am trying to put in these elements into my lesson which is extremely time consuming.

She referred to her days as “exhausting”, however, she gave the impression that she thoroughly enjoyed her job and would continue to give up personal times to prepare lessons for her students. Additionally, Mrs. Lawrence attends classes outside of the school days as well stating, “I’m one of those teachers that I’ll go to workshops, I don’t care if I get paid or not. I’ll go after school, I’ll go on a weekend.” She also talked about taking large amounts of work home for the summer to work on to prepare for the next school year. She states that her favorite thing about teaching is that it is never boring. Mrs. Lawrence is always learning something new to incorporate into her teaching and as a result she continues to grow as a teacher and as a professional.

Within the quantitative data analyzed, Mrs. Lawrence’s overall mean class average identified was 94.8%. Her mean Progress Book posting is 1.25, and she has had one removal to office. Her mean class size is 20.00.

Case Description

Upon entering the class, students were already actively involved in reviewing an assignment on patterns and sequences from the day before. The teacher was questioning them, trying to have them think through a problem. The students were shouting out the answers as they came to them, and Mrs. Lawrence was thinking through the problem out loud, modeling her
thinking process for them. When finished reviewing, Mrs. Lawrence told them, “Pass up the papers. I am only going to grade one side.”

Mrs. Lawrence had the directions for the class projected onto the smartboard. It told them exactly what they need for the next class activity: “On your desk you will need: pencil/eraser, calculator, textbook p. 612, and homework”. She reviewed what the assignment from yesterday was and asked thought provoking questions to the students about functions.

Mrs. Lawrence then moved on to graphs. She had a way of moving through the information quickly, but not too quickly. All of the students appeared to be paying attention, all students’ heads were off their desks, looking forward; there was no talking or disruption of any kind. Mrs. Lawrence’s objective was to have the students learn to relate graphs to situations. She asked the students to recite aloud the paragraph written on the smartboard, which was the lesson’s objective written out. Mrs. Lawrence told the students, “This is nothing new, we have done this before.” Then she asked them, “When have we done this before?” Mrs. Lawrence was trying to connect this new knowledge to prior knowledge the students already have. Next she asked them when they are going to use this skill. Mrs. Lawrence presented an entire slide about careers that used this particular skill and again had everyone recite it aloud.

After presenting the career information, Mrs. Lawrence presented how that particular career would actually use the graphing skill. First, she presented a highway patrol officer. Mrs. Lawrence had an accident problem with skid speed and charts to figure out on a graph how fast a person was going at the time of the accident. She walked through the problem with the students, showing them step by step how to figure out the answer. When finished she asked, “Why do we need to know how to analyze graphs?” She started to say, “For job skills”, by herself but the class finished the response with her. The next career was a real estate agent. Mrs. Lawrence had
a student volunteer read about the career, and then the class discussed how money was made being a real estate agent. She put a graph on the smartboard; she took the time to review the x and y axis before moving on to the problem about potential gross sales price increase.

Contextualized instruction being employed in the classroom provides relevant real life examples for students to learn from. Mrs. Lawrence sees the importance of providing these opportunities for her students and spends a large amount of time researching materials to make learning applicable for her students. She stated that she spends a lot of time preparing lessons because, “I have to research, especially job careers, find examples, and create them, type it all out.” She stated that when she introduces a lesson she will sometimes try to, “attach the lesson to a career so that they can see why it’s relevant.” Mrs. Lawrence tries many different things to increase student engagement in school:

When I introduce a lesson, I’ll tie it in to a previous lesson. I’ll introduce lessons different ways. Sometimes I’ll use Holt on Line, sometimes I’ll create my own lesson with home software programs. Sometimes I’ll just use a totally different textbook or get something off the website, it just depends what I think fits that lesson the best. I try to do more facilitating than direct teaching. I’m just starting to use more graphic organizers, the day that you came, I did the KWL chart [a graphic organizer describing what students Know, What students want to learn, and what students Learned] …no, I didn’t, that was the instructions that last time we did it, the KWL chart, and we built on that. I haven’t always used organizers in the past but I’m starting to use them more now.

I questioned Mrs. Lawrence about the student’s reaction to facilitation in the following exchange:

Interviewer: How do the students like the facilitating part?
Mrs. Lawrence: They get used to it. In the beginning, nobody likes to talk. So, I do a lot of calling on students. They aren’t used to the open-ended type of learning that requires them to recall prior knowledge in order to problem solve. They are used to being told instead of discovering.

Interviewer: Do some students like it more than others?

Mrs. Lawrence: Yes. I do open-ended questions and a lot of “lead ins”. If I find the wait time is too long, then I’ll lead them into an answer, kind of hinting them into the direction they need to go. Sometimes that’ll work. One person might say something that I can tie in and send them in the right direction, you know, and it works real well. So, I do a lot of that, then after the lesson has been introduced, I’ll put them into cooperative learning groups and have them work together. I’ll monitor that because a lot of the time you know how that works. Some people take the lead while some sit back, and let others do all the thinking. I want everybody to take an active role, everybody to learn from each other. Sometimes, I’ll do collaborative learning where I won’t group them; I’ll just have everybody contribute to the lesson. “Where will we go from here?” “What step would be next?” Just like facilitating. I make sure that everybody gets involved in it. If I do cooperative, which I like to do a lot of cooperative learning, a lot of times I’ll group them in different ways; sometimes, a mixed group, high functioning with a low functioning student – mix it up, so there’s a wide variety of learners. So it’s not the same all the time.

I observed Mrs. Lawrence mixing up her lesson as well. During the 40 minutes I observed the classroom, she went from activity to activity and topic to topic. The class was well paced enough to keep attention, but not too fast to lose slower students. The material kept student interest as well with relevant real life examples throughout.
During the rest of the lesson I observed Mrs. Lawrence questioning students about a myriad of topics. First, she asked students to tell her what they thought the meaning of two vocabulary words (domain and range) pertinent to the next topic they were going to discuss was. A student actually brought up prior knowledge, “I think we talked about range before,” Mrs. Lawrence complimented him and said it was excellent of him to remember. She presented a short description about line graphs with some pictures on the smartboard. Next she asked a student if she would be willing to take a risk and make up a story to show this kind of line on a graph (pointing to a graph with a line going from the right to the left). A student volunteered and told a story about shopping in the mall. Mrs. Lawrence repeated the story back tying everything the student said back to the vocabulary words, the relationships of the x and y axis, and change over time. The last section of her lesson included Mrs. Lawrence involving her students in the completion of a worksheet on graphs. She was able to get all students involved. If a student was sitting there too quietly she said, “I haven’t heard from you, what do you think?” Students came up to the smartboard and answered questions, or students would read the questions aloud.

Mrs. Lawrence is always trying to connect students learning to prior knowledge. This is evident from the following exchange:

Mrs. Lawrence: I’m always trying to tie my lessons into the previous lessons, so I can tell if there’s growth. And there are times that I refer back to previous chapters. I’ll cite the chapter, back in chapter two, we did that in chapter four. I site chapters, I bring in that recall constantly.

Interviewer: I noticed in the class that I watched that you said, “This really isn’t anything new.” You do this all already, you know, try and start that without them worrying about it.
Mrs. Lawrence: Exactly.

Interviewer: They really aren’t learning anything new, just recalling previous knowledge.

Mrs. Lawrence: Right. I even have the elementary curriculum maps. So, I know what they’ve learned in elementary school and I’ll even say, “You did this in fifth grade. So what do you remember from that?”

Interviewer: Do you find that a lot of them remember?

Mrs. Lawrence: They do. But after coaxing, after prodding, a light bulb will go off in one person and then, it starts to trickle. Pretty soon people are starting to remember more, and students are saying, “Oh yeah.” You know, it sparks off everybody’s memory.

Mrs. Lawrence believes that connections to prior learning are very important. I observed her using them in her lesson, and she spoke of their importance as well.

Providing feedback to students was also a topic of our interview:

Interviewer: What kind of feedback do you give your students? Do you give them data from OAT scores? Do you give them test scores? Do you give them papers back?

Mrs. Lawrence: They get everything back. I grade everything.

Interviewer: Do you grade all the papers yourself?

Mrs. Lawrence: Oh, no, I can’t do it alone. In fact, on my bulletin board, you’ll see a court case that was cited. A student had complained to a parent about trading papers and grading them in class. The case went to the Supreme Court and the court supported trading grading in the classroom. That’s another tool that fosters student learning. So we do a lot of trading grading in here. We talk about that before we even begin, that whole process on how someone else’s grade is not for you to run out of this classroom and
publicize, you wouldn’t want them to do it to you. So, it’s nice for you to be able to see that, “Hey, this person…” you know, “thinks the same way I do or doesn’t know as much as I know, or maybe knows more than,” you know. They get to compare their work with someone else’s work which, I think, is valuable. I think that it helps them with their self-esteem in math. Or, “This person might be better this day, but that person’s paper that I graded the other day, I did better than them. Some things I’ll be good at and some things I won’t be good at.” You know, I think it’s really healthy for them. I’ve never, in my entire career, doing trade grading, had any problems. I only had one student complain and so their parent called me. Think about it, 105 students, 105 papers a day, and I grade everything.

**Interviewer:** That’s tremendous.

**Mrs. Lawrence:** Yeah, I grade everything.

**Interviewer:** Do you do any other kind of feedback? You know like giving them their OAT scores or anything like that?

**Mrs. Lawrence:** Yes, we do short-cycle assessments. We go over those. We go over those results. So they can see that. Another thing that I put into my lessons is actual achievement test questions from previous tests that pertain to that skill. I do that because the book teaches you a skill in isolation, and all the OAT questions are story problems which require you apply that skill in a different way in order to problem solve.

During the lesson, Mrs. Lawrence was observed giving feedback to her students as they gave correct answers during class. She gives a variety of feedback to her students, but it does seem to all be summative in nature.
Mrs. Lawrence spends a large amount of time utilizing Progress Book as a student-teacher communication tool. She reports that she uses Progress Book in the following way:

I have assignments that I can put on homework page of progress book so students can access it. The other thing that I have on there is a curriculum map. I have syllabi for every chapter, I have vocabulary list for every chapter, and this coming school year, I’m going to post those on there, and they aren’t currently on there. Also, I have access to KIA. It’s a website that allows you to create games for vocabulary. I was able to do it with the first three chapters of the book and they are posted to the homework page on progress book.

The games she has created for her vocabulary lists include “Hangman” and “Concentration”.

Mrs. Lawrence learned to post items to Progress Book by attending regular professional development within the district offered by the technology coordinator. She has also learned how to record her lessons from the smartboard. Her first thought from this experience was, “Do you know how much time that would give me to work with another student? Oh my gosh.”

Mrs. Lawrence has few behavior problems in her classroom. She states that she thinks that the behavior problems she does see in her classroom are associated with learning disabilities or attention deficit disorders. For the most part she finds her students:

...to be very respectful. Sometimes they’re bored. I can’t make every lesson something you want to be a part of…who wants to learn math? You know, the parents are, I think, a part of the problem because they’ll come to my conferences and tell me, “I hated math.” Then you hear the students saying that they hate math so I think it’s a learned behavior. I try to make it interesting. It’s tough. It’s tough. It really is.
Because she has a background in special education, Mrs. Lawrence uses a lot of special education behavior management skills to handle student misbehavior:

I use close proximity, direct eye contact, you know, hand motions, I will move students, I have a tall carrel, I’ll isolate a student, so that they can still see the board but they are sectioned off from the rest of the classroom. If I have to, I’ll call the counselor; fortunately, she’s just right next to me. I’ll call her in to monitor my class and I’ll make a phone call to the parent right then and there to distinguish the behavior. So, I think I’m pretty good at distinguishing unwanted behaviors and honestly, I don’t have many classroom removals.

Mrs. Lawrence would remove a student from class if a student “starts to disrupt the learning of others.” She puts a high value on learning and she does not want any student to take that away from another. However, Mrs. Lawrence states that she would try to distinguish the behavior herself before sending the student to the office for the principal to handle.

When asked about the student achievement she would like to see during the school year, Mrs. Lawrence replied:

I want to see growth from everybody, but I don’t. Their learning fluctuates. I find it very difficult to get growth from everyone for everything. They say everyone should have some growth, and they do, but they don’t seem to have enough growth to change our school’s designation which is Continuous Improvement. I think that is a direct result of not having someone follow through after they leave this building. Because in that 45-minute period, when I’m trying to cover all that I put into a lesson, I also want to leave time for them to begin their homework in class because I know chances are, it’s going to come back at the same point as they left the classroom.
Mrs. Lawrence explains how she accommodates for students not having adequate practice time:

That’s why, in math, unlike the other content areas, I just take points off of late work, and I will allow students to correct failing work because it’s part of learning. I’ll substitute the failed homework with another worksheet, if I have a student who’s motivated enough to keep redoing the same paper, I’ll replace the grade. I won’t even do an average on it. I’ll go ahead and replace it because I think it’s important to see what they’ve learned, not what they did initially. Because initially, there may have been nobody at home to support that work, you know, students will take the path of least resistance every time. There’s nobody at home to say, “Did you have homework? Did you get it done? Where’s your planner book?” Blah, blah, blah, even opening the book bag, if they take it home, you know, so I give them a lot of breaks when it comes to homework. My goal is for them to learn. It’s harder on me because I have to go back and re-grade and re-teach, and it’s exhausting for me.

Mrs. Lawrence’s goal is for all of her students to be proficient. When asked if she thought if that was possible she replied, “I’m an optimistic person. I think with everything that our curriculum director has put in place it could be a reality. I hope to see that soon, because it starts from the bottom up.” She also commented that everything she does in her classroom is towards that goal. She stated:

Everything that I’m doing is going towards that goal such as recording my lessons, putting everything on Progress Book so the kids have access; providing them with a Syllabus and vocabulary list for every chapter; creating best practice lessons, and staying after school to tutor students. I’m the one who types in every student’s name on this
Mrs. Lawrence agrees that she gives her students plenty of tools to be successful academically; however, she is not always sure if they are taking advantage of them. She states, “I ask them, especially my students who are struggling.” But she also feels that there is no excuse. Students are given calculators and access to textbooks on-line. Mrs. Lawrence seems to contradict herself though, because she also spoke of the lack of time for practice and parental support being barriers to student learning.

When asked about instructional support, Mrs. Lawrence replied that she expected, “the principal to supply materials I need for my classroom.” As far as receiving that support Mrs. Lawrence said, “Absolutely. There is nothing that I have asked for that I haven’t received.” When asked about her expectations of support from the principal concerning disciplinary problems, Mrs. Lawrence answered that she “would want him to be consistent and follow the handbook.” However, she did not feel that the principal was consistent. She explained:

I would have to say that he’s not [consistent], but I understand why he’s not. When you have a staff member that lacks training in behavior management techniques, why should this child be penalized because this teacher doesn’t know how to control behavior?

That’s why I think there is a lack of consistency in student discipline from the office. Mrs. Lawrence’s strong behavior management skills in the classroom allow her to handle the majority of the behavior challenges occurring in her classroom. She has a large repertoire of skills allowing her to choose interventions that will work best with the students in her care before sending them to the office.
Analysis

Mrs. Lawrence is truly committed to the learning of her students. This can be evidenced by her stated goals for her students (for all students to be proficient) and the reason she states for a removal from her class (if the student is disrupting the learning of others). It can also be seen in the amount of time she spends preparing well researched lessons that are relevant to the students in her class. She spends a considerable amount of time grading and re-grading student assignments to give them appropriate feedback. Finally, Mrs. Lawrence posts quality resources for students on Progress Book.

I observed Mrs. Lawrence using a teacher-centered teaching style. However, after questioning her, it is evident she uses a student-centered approach as well. She described using facilitation more than direct teaching in her classroom.

Mrs. Lawrence uses an assortment of research-based practices in her lessons. Connections to prior learning and contextualized instruction are used most often in her classroom. These two research-based practices were both observed in Mrs. Lawrence’s classroom and discussed with her. Mrs. Lawrence discusses providing feedback to her students and how exhausting this area of teaching can be, but she does feel it is important to give her students feedback regularly. However, the feedback described is summative in nature.

Mrs. Lawrence does not have many behavior problems in her classroom. Because of a background in special education, she is well versed in behavior management techniques and utilizes them before she opts to send a student out of the classroom to the office for consequences for his or her misbehavior. If she does need to send a student to the office, it is for the disruption of student learning, reaffirming the importance that all students be given the opportunity to learn in the classroom.
As far as instructional support, Mrs. Lawrence was confident that the principal gave her the materials she needed to help her teach. She did not have much more to say on the topic. She did not speak about collaborating with the principal in the areas of instruction, curriculum or assessment.

Mr. Keyes

Profile

“I don’t tolerate students making fun of others. They [the students] know that. They know that after the first day of school.”

(Mr. Keyes)

Mr. Keyes is a teacher at a junior high school. He has been teaching eighth grade for the district for three years. Mr. Keyes has always worked for the same school district. He received a Middle Childhood Education Degree specializing in math, science and reading. He is also currently working on a Masters Degree in Educational Technology. When asked why he is pursuing a degree in that area he stated that educational technology interests him.

Mr. Keyes spends personal time investing in professional development opportunities for the district by attending seminars that are offered by the district. He states that he usually does this for no pay or for no stipend most of the time. Mr. Keyes is an active member of the school district; he is the assistant coach of the high school cross country team and serves on the Building Focus Team. The Building Focus Team is a team of people chosen by the building principal as an exemplary teacher leader which will serve to facilitate the district’s improvement plan within their individual building by creating building goals parallel to those of the district.
When asked what led him into a teaching career, he replied, “I had an excellent teacher in high school.” This statement leads me to believe he has the goal to be that teacher for the students he teaches. When asked about his love of teaching he responded, “Oh yeah. At the end of the year, I could probably do 40 years. I would do it until I keeled over, I really enjoy it.” He was observed connecting with students by joking with them:

*Mr. Keyes:* Does this make sense? You could all do this in your sleep?

*Students:* Yes!

*Mr. Keyes:* Okay, fall asleep.

*Students:* All pretend to fall asleep at their desks

Mr. Keyes admits, “I tend to every once in awhile tend to kind of goof around, you know, kind of joke around.” He agreed that this is what helps students build relationships with him and respect him as a teacher and person.

Mr. Keyes worked for Americorps for two years. Americorps members engage in direct service activities such as after-school tutoring, home building, and capacity building activities such as volunteer recruitment for the organization they serve (Americorps, 2009).

Within the quantitative data analyzed, Mr. Keyes’s overall mean class average identified 132%. His mean number of postings to Progress Book was 2.33. He has had three removals to office and his mean class size is 14.88.

*Case Description*

Mr. Keyes has a very organized classroom. The students were seated two at a table instead of at desks, although there was a row of desks near the wall. There were some figurines strategically placed around the room; some are of the *Star Wars* characters, I also saw a *Ghostbusters* car. A few motivational posters were hanging on the wall despite the late date in
the school year. Mr. Keyes began the lesson with a problem of the day. The problem was projected onto the airliner (a piece of technology which makes it possible for the teacher to write on the smartboard from any location in the classroom), and the students worked the problems individually at their seats until a student volunteer came to the board and solved it for the class. While the students worked, the teacher walked around the room, surveying the student work with an airliner in his hand, helping those students who needed it, and giving praise to those who completed the problem correctly.

Mr. Keyes then started his lesson with a statement of the lesson objective. He told the class, “You have already done this stuff this year. It is really nothing new. We are just giving it a new name.” He put a problem on the smartboard and solved it with the class, walking around the room to monitor how the students were doing. Next he would have the students try one on their own, and then have a student go up to the smartboard and show their work. Students were quick to volunteer. He said that he never has a problem with students volunteering, “in every class from inclusion to honors, I have volunteers every day.”

I asked Mr. Keyes if he had problems with students making fun of others when they went up to the smartboard and made a mistake:

*Interviewer:* Do you have problems with kids making fun of others when…

*Mr. Keyes:* No, because they know as soon as they do, they’re out of the room. I don’t tolerate anything like that. They know that. They know that after the first day of school.

*Interviewer:* So that’s just an expectation that you set? How do you go about setting those expectations at the beginning of the year?

*Mr. Keyes:* We go over the rules. I have, you know, like couple basic rules. The basic ones: don’t talk when the teacher’s talking; things like that. And then I ask the other
students what they feel are fair rules. Usually, it works out fairly well. We go over that everybody makes mistakes, and you can’t make fun of that. If you laugh at “little Bob” making a mistake, next time you make a mistake, guess what? He’s going to be laughing at you twice as hard as you just did. So just don’t. They just know it’s an expectation I set at the beginning of the year. I’ll even go up there and make a mistake on the board just to show that it happens and it’s not funny. Just, you know, try to help each other out if someone makes a mistake.

A student happened to make a mistake in the class I observed. Mr. Keyes actually took the heat for one of the mistakes that the student made, saying that he did not do a good enough job teaching the skill; it was a confusing skill. Next he demonstrated the correct way to do the particular skill.

The class period was filled with practice and review. The students appeared to be engaged in their work the entire period; all students were working and highlighting. Almost every student went to the board at least once, and if they did not go to the board, Mr. Keyes asked them at least one question they were required to answer. At the end of the period, students were given homework and a glimpse of what they were going to be working on for the next few days.

Mr. Keyes said that the majority of his classes all follow the same pattern. He describes his typical day in the following way:

I have them work on a problem of the day, which is like one or two problems that’s over what we did the day before, on the lesson we did the day before. Then they’re supposed to pass in their homework. Usually the problem is homework questions. Some of them catch that, some of them don’t catch that. It works out. After that, we go into a lesson
and pretty much show them the objective and standard for the day and then we just, you know, I’ll put a problem up. I’ll go through vocabulary and I’ll show them how to do, like, I’ll split it up in three different sections. They’ll be an easy problem, a medium problem, and a hard type problem. What I’ll do the problem with them, together, and then, you know, see how they do, do another one together or let them try it on their own. I’ll do that again for the medium one. I’ll show them how to do it and then I’ll let them work through it together, then they do one on their own, same thing for the last, hard one. After that, I give them a couple extra problems to practice on and see if they have it and if they don’t, then we go back and kind of tweak what they don’t understand. And if they do, I give them their homework and they have the class time to work on it. If they don’t, then they take it home for homework.

After hearing Mr. Keyes describe his typical day or class period, I would agree that this is what I observed in his classroom. Since he is working on the same problems with a class full of students, I asked him how he dealt with the fact that some learners might get the knowledge quickly and others might struggle. The following exchange occurred:

*Mr. Keyes:* I walk around – I have the airliner. I walk around the room and try to help the students that maybe don’t understand. Sometimes I get everybody and sometimes I don’t. I try to get everybody but I’m sure there’s times that maybe one or two students, you know, I try to walk around the room and make sure that every student is understanding it on some level. They may not completely master the topic but at least they’re at least starting to understand it so that if we talk about it a little more, that they will get it.

*Interviewer:* The kids that get it right away, do they get bored?
Mr. Keyes: I barely have any students get bored because I have harder things for them to do. I have challenge problems and what-not.

Interviewer: Do they sometimes help others?

Mr. Keyes: Yeah. Sometimes you have students that do, you know, best. Usually, when I try to seat students in the desks, tables, I’ll have one student that I know that usually picks up on things quickly and one that maybe doesn’t. So that way that student can turn around and help the other students. Like in the one class that you watched, there’s one girl that wasn’t quite grasping it but there’s a girl that did and she was turning around trying to help her. She ended up getting it; she did really well on the test we took after that.

An instructional strategy Mr. Keyes uses in his class besides what he describes in his typical day is the occasional use of group work. He says that he does not use group work often because depending on the topic, “it’s better to do individual, everyone can work at their own pace.” He finds that to “get the general basics down, it’s better to work individual.” Mr. Keyes will do group work with:

- projects or presentations, you know, if there’s a really hard worksheet, and I want them to kind of work off each other, and I only have one work sheet so it’s not like they’re copying, they’re all working together. Yea, I’ll do groups then. Usually, I just do individual.

Mr. Keyes explained a project he did with his honors students. He has them make a podcast about a math topic of their choice (i.e., equations). He continued:

We went to the library and they looked up their topic. They got a bunch of information that wasn’t in their textbook, you know, they learned outside the regular, you know, class
materials. I borrowed the laptops from the science teacher and I had them go to a
different part of the hallway down here and record their podcast. It was neat. They were
actually a lot better than I thought they were going to be. It was really good.

He commented that the kids really enjoyed doing the podcasts, and has no problems using the
technology; “They pick it up faster than we do usually. I showed them the basics. They were
able to do it from there.”

Mr. Keyes uses Progress Book as a tool to provide resources for his students. He states
that he typically posts his class notes on Progress Book daily or he uses a “Moodle” site to do the
same thing. He describes the process:

After we do the notes in class, I’ll save them, like for first period or second period, and
then the next period, we’ll do the notes and if I feel the notes were better than the period
before, I’ll save that over it. I’ll do that the whole day, and at the end of the day, I’ll have
the best notes. I’ll save that as a PDF file and then upload it to that Moodle site. If the
kids are absent or BIA [In-school Suspension], or anything, or if they plain forgot or
didn’t take notes that day, for whatever reason, they can go on that site and look at the
notes we took in class.

Mr. Keyes has his rules and class expectations posted on Progress Book as well as materials
needed for class and projects. He states that he knows that his students are using it because they
tell him about it. He says that they come up to him and say, “Hey, I was there and I was looking
for this and I couldn’t find it,” or “Oh yeah, it’s under the other layer or something.” Mr. Keyes
comments that right now there is no way of tracking student use of Progress Book but, “Next
year, I guess the kids are all going to have a sign-on and stuff, then I will be able to track who is
actually using it.”
Mr. Keyes does not have many behavior problems in his classroom. In the entire year, he thought he had about three office removals from his class. Because he has so few, I asked him what it was that would warrant him removing a student from his classroom:

If they’re making fun of a student or if they back-talk another student or teacher that’s in the room, anything like that. If I hear them, it’s kind of a hard question because I give them a warning and then they get a detention, then they get kicked out. It’s work to have them have too many removals in classes they seem to behave real well. They know it’s not an empty threat. They know if I say, “Listen. Stop or you’re gone.” They know they will be gone if they continue.

Mr. Keyes mentioned that when he said his students knew that he did not give empty threats. He says:

They know it’s not empty. Like if I say, “Ok, listen, if you talk one more time, then I’m going to kick you out.” They know that I’m going to kick them out the next time they talk.

Mr. Keyes has a series of steps he uses in his class before resorting to an office removal. He gives his students a detention with him if he feels they have done something that warrants that type of consequence. He stated that his detention consisted of making the students “straighten the room up and after that, they go. So it’s not like it’s anything hard.” If the students do not attend his detention, then he will assign them a school detention, but he does not have that happen very often. Mr. Keyes agreed that this was due to some amount of mutual respect for not getting kicked out of class and the relationships he has built with his students.
Mr. Keyes would like to see all his students perform better on the district’s short cycle tests. He expects them to be able to get to the “units of pretty difficult tests.” He elaborated on student performance on the short-cycle tests:

They start the year at like, 20% and stuff like that. Which, you know, is pretty bad. My goal is to get them to 65% - 70%. By the time we take that test, we’ve covered 70% of the material. So, I want them at somewhere between 65% and 75%. If they’re higher than that, that’s great. If they’re lower than that, then I know last year, we did a pull-out with a math teacher in the building.

The short-cycle test is a comprehensive test. Mr. Keyes explains:

They cover everything, which is why, you know, at the beginning of the year, they don’t get very much because of it because we give it the second week of school. It’s not like we’ve talked about anything. They’re expected to remember some of the stuff from seventh grade, which usually, they, you know, over summer, forget stuff. By winter, it’s covering the entire year worth of stuff, so they should be expected, by the winter, to do about 45% - 50%, because it’s half way through the year. In the Spring, it’s about 70%, 65% - 70% of the stuff.

When asked what he thought added to the achievement problems that he sees in his class, Mr. Keyes said, “There’s a lack of a solid foundation.” He has to spend a month at the beginning of the year reviewing basic facts and order of operations; “things that they should know from sixth and seventh grade and they don’t.” Mr. Keyes continues:

I spend so much time catching them up – by the time they come to me, they should know how to find the area of a square and rectangle, and they don’t. Some of them do, some of them get it, but a lot of them don’t remember or just don’t, you know, weren’t paying
attention when they were talking about that last year. That’s a lot of the issues that we have, is the ground work. By the time we get them, we’re trying to give them that ground work and then all the eighth grade stuff so that they can pass the math test.

Mr. Keyes felt this was a challenging part of his job, but he was not discouraged. He mentioned ways his department has changed their curriculum to see how things will work. He had a positive outlook and gave me the impression that he would continue to try and improve test scores any way that he could. In reference to the constant review of the basics as well as having students learn grade level material as well, he said with a shrug, “I guess that’s just the game we play.”

His response to my question about the expectations he had from the principal as far as instructional support included both behavior and academics:

I guess I don’t really have any. Just kind of, you know, if I do have to send a student out, you know, I don’t want it to be a slap on the hand and send them back to class. I want the kid to know that you shouldn’t do that. [The principal] does a really good job of that. I’ve never had, I guess that’s why I said that, because I’ve never had anything come up. It’s all taken care of already. If I need a material or something, I know last year, we had been struggling with losing calculators, left and right, the students were just walking off with them. It happens, I guess. It happens every year, but we put in a thing to get calculator folders, you know the big thing that hangs on the wall and he went through and he got each of the math teachers one of those. So, I mean, I guess, I don’t know, as long as everything is hunky-dory, I guess, I don’t really have any expectations.

Mr. Keyes did not have anything else to say about the principal. He was happy with the job that his principal has been doing, and as long as everything was running smoothly, he was happy.
Analysis

Mr. Keyes is a young good-natured teacher who follows the same routine in each of his classes. He has high expectations for his students despite challenging student achievement hurdles. He also has high expectations for himself as a teacher; he does not seem discouraged by the daunting task of raising student achievement on district short cycle tests, and the Ohio Achievement Tests.

Mr. Keyes uses a teacher-centered teaching style of instruction. He presents knowledge to his students and has them practice. He states that he does not have students participate in group work often, preferring that students work individually when learning basic skills. He does have students complete group projects, but he is careful to make sure that all students are responsible for his or her learning when they are participating in groups.

Mr. Keyes was observed making connections to prior learning at the beginning of the lesson I observed. He reminded the students they had already learned a skill similar to this previously in the school year. He does this often to help students not feel intimidated by new units of learning. Mr. Keyes spoke about differentiating for his students. He said that he provided challenge problems to his higher functioning students and also had the higher functioning students help the lower functioning students. He was very confident that students did not get bored in his class.

Mr. Keyes does not have many behavior problems in his classroom. He sets clear expectations at the beginning of the year and he feels the students know that he means what he says. When problems do occur, he prefers to handle them without sending his students to the office. He gives students classroom detentions before he resorts to sending students to the office for consequences for misbehavior.
Mr. Keyes was happy with the principal of his school. Basically, as long as everything was going smoothly he was happy. Mr. Keyes referred to the principal’s ability to get calculators for all the math classrooms as a means of instructional support. He also referred to the consistent application of consequences to students when they were sent out of class. Since the principal has done this he has a positive view of the principal.

Group Synthesis and Research Questions

The following section will present the four participants’ quantitative data and then analyze the common themes found in the case studies of the four teachers participating in the present study. The themes found among the four participants include: (a) the time spent outside of the classroom participating in school related activities, (b) use of research-based strategies, (c) differentiated instruction, (d) behavior management, and (e) the perception of instructional support from building principals. Finally, the section will address the qualitative research questions of the present study.

Participants’ Quantitative Data

The quantitative data for the participants is shown in Table 7. The data were analyzed from Progress Book, a pre-existing data source. The participants were selected from a list of criteria. The data are presented here to give the reader a clear picture of the variables studied to determine the effectiveness of the participants in the current study.
Table 7

Quantitative Data for Participants

<table>
<thead>
<tr>
<th></th>
<th>Mrs. Jackson</th>
<th>Mrs. McDonald</th>
<th>Mrs. Lawrence</th>
<th>Mr. Keyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Class Grade Average</td>
<td>75.00</td>
<td>92.00</td>
<td>94.80</td>
<td>132.00*</td>
</tr>
<tr>
<td>Mean Use of Progress Book</td>
<td>4.50</td>
<td>2.00</td>
<td>1.25</td>
<td>2.33</td>
</tr>
<tr>
<td>Mean Number of Office Removals</td>
<td>0.00</td>
<td>6.00</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Mean Class Size</td>
<td>18.25</td>
<td>15.50</td>
<td>20.00</td>
<td>14.33</td>
</tr>
<tr>
<td>Core Academic Area</td>
<td>Science</td>
<td>English</td>
<td>Math</td>
<td>Math</td>
</tr>
</tbody>
</table>

*High class average is due to honors classes which have the possibility of earning higher than the 100% grade average.

Time Spent Engaging in School Related Activities

All four participants discussed spending time outside of their planning periods during the school day to engage in school related activities. The activities may have included preparing lessons, researching materials for lessons, posting materials on Progress Book, or attending seminars or workshops. Mrs. Jackson spoke of attending in-services to learn how to post materials on Progress Book, something that is not required by teachers to do for his or her students. She added that she took her own time to develop a web page for her students.

Mrs. McDonald uses a lot of her time to plan lessons that are relevant to her students. She takes time to get to know her students on a personal level, then takes time to plan lessons that they will connect to. Mrs. McDonald, like Mrs. Jackson, has spent time in after school workshops learning to use Progress Book as a learning tool for her students. Mr. Keyes also attended after school technology seminars to increase his knowledge.
Mrs. Lawrence discussed using a large amount of personal time researching and preparing relevant lessons for her students. She also works during her lunch period on a regular basis. While Mrs. Lawrence readily admits how exhausting and difficult it can be to create the type of lessons she does, she is the type of teacher who is puts student learning as a priority, so the effort she is putting forth is worth it to her. Mrs. Lawrence also willingly attends after school workshops and weekend seminars to continue her own education.

Three of the four participants have earned Master’s Degrees; Mr. Keyes is currently working on his. This shows dedication to the teaching profession; working full-time teaching and going to school are not easy tasks. Mrs. McDonald and Mrs. Lawrence have earned a license in school administration; they both have experience in special education as well. I believe that some of that experience may have helped them to realize the importance of engaging student learners in the classroom.

*Use of Research-Based Practices*

When analyzing the qualitative data, there was a lack of the consistent use of research-based practices by all four participants. Research-based practices were used by the participants, but not all the practices that were explored in the present study were observed in use in all the classrooms. The teachers were only observed for one class period; it is entirely possible the desired practices were not occurring in the lesson observed. Interviews, although guided, may have moved in different directions with individual participants, and not addressed some of the researched-based practices happening in the participant’s classroom. Table 8 reviews my interpretation of the classroom observations and participant interviews regarding information about research-based practices.
Mrs. McDonald and Mrs. Lawrence both discussed and were observed using contextualized instruction in their classrooms. They used lessons the students were able to connect to a real life situation in his or her life. Mrs. Jackson and Mr. Keyes were not observed using this practice and did not discuss it during interviews. Three of the four participants used connections to prior learning. Mrs. Jackson may use this practice; perhaps she is not aware it is a research-based practice, and she does use it without knowing she does. However when Mrs. Jackson was asked directly what research-based strategies she used, she did not mention connections to prior learning.

All of the participants gave feedback to their students on a regular basis. The teachers graded papers and returned them to the students; they gave short-cycle assessments and provided them with the scores; they made sure students knew their OAT or OGT test scores. Teachers also praised students within the classroom environment while they were doing class work. However, none of the teachers provided students with any kind of formative assessment, all feedback provided to students was summative in nature.
During the classroom observations, the teachers were all practicing teacher-centered teaching styles. The teachers were directing knowledge to his or her students directly through a lecture and offering students the opportunity to practice the skills discussed, participate in an activity, or take guided notes. Mrs. Lawrence was the only teacher who discussed being a facilitator of student learning, which defines student-centered learning. Mrs. Jackson talked about using discussion in her classroom, but she described it more like students talking amongst each other rather than her being a facilitator of student learning.

Only Mrs. Jackson and Mrs. Lawrence talked about using graphic organizers in their classrooms. Mrs. Jackson said that she used them from “time to time” and Mrs. Lawrence said that she was “starting to use them more”. Science and Math are both subject areas that are conducive to using graphic organizers to help students understand content area; perhaps this is a reason for their use in these particular teacher’s classrooms. However, this would not explain why Mr. Keyes is not using graphic organizers, unless he does use them and he just was not observed using them, it was not brought up in his interview.

Differentiated Instruction

Comments or lack of comments made from the participants about differentiated instruction indicate a lack of a real sense of the definition of differentiation. Only two of the participants brought up differentiation in the classroom during his or her interviews. I should caution the reader that the two teachers who did not bring differentiation up may very well practice it, but it was not observed or discussed with them. What Mrs. Jackson and Mr. Keyes defined as differentiation gives me the feeling that they may not have a sense of what differentiation for diverse student learners may involve. Mrs. Jackson thought it would be difficult be differentiate; and differentiation most definitely is a difficult task. Her reason for
thinking it was difficult was because when she tried to provide more challenging materials, her students would rather not participate in the activities presented to them. Mrs. Jackson also stated that she thought differentiation would only occur in her lower level classes. Differentiation may occur for all levels of learning. Higher functioning learners may also require differentiation as diversity in learning styles is not limited to lower level learners.

Mr. Keyes described his use of differentiation in the classroom by providing challenge problems to the higher functioning students in the class. He also has the higher functioning students help the lower functioning students. This is a useful strategy to help lower functioning students in the classroom; however, many more differentiation strategies exist to help lower function students in the classroom.

Behavior Management

All four teachers prefer to handle misbehavior in their classrooms before sending students to the office for a consequence. The participants rarely have behavioral issues that they have to deal with, but when they do, they handle them themselves. Mrs. Jackson utilized proximity control and talking with the students to have them comply with her instructions. Mrs. McDonald discussed being proactive with her students; she has things for the talkers to do in her classroom, or if students can’t sit still she allows them to stand in the back of the room. She also gets to know students on a personal level, earning the student’s respect. Mrs. Lawrence uses proximity control, and other behavior management techniques to distinguish unwanted behaviors. She has the support in her building to be able to call parents immediately when students are not doing what she wants them to do. This is very effective for her. Mr. Keyes has a set behavior plan in his room for rule infractions. All four teachers contribute their low office removals to setting clear expectations at the beginning of the school year. All participants were observed having a
good rapport with their students as well; greeting the students, having personal conversation with
the students, laughing, or telling jokes. The rapport also contributes to positive classroom climate
which decreases the probability of office removals.

Perception of Instructional Support

All of the participants were asked what their expectations from the principal as an
instructional leader were, and then if they received that support. The teachers all felt that
instructional support meant that they received the materials needed to teach their students. All
participants felt their principals were great principals and received everything asked for. Mrs.
Jackson added that she thought the principals also should make sure the teachers should be
following the curriculum standards and teach what they are supposed to be teaching. Mrs.
McDonald discussed that she felt she had a responsibility to the principal to help him be aware of
what was happening in the classroom so he knew better how to assist her with any professional
development programming he might come across. Mr. Keyes had no expectation from his
building principal as long as everything was running smoothly. He did feel the principal should
provide instructional materials when asked, and support the teachers with discipline when
needed. He gave the impression he had not given the idea of instructional support much thought
because he was quite happy with the principal overall.

Research Questions

How do effective teachers engage student learners to facilitate student learning and
decrease office referrals?

Among the four participants, a variety of ways to engage student learning and decrease
office referrals was observed. In Mrs. Jackson’s class, while a teacher-centered style was used
and few research-based practices were utilized, she had the lowest number of office referrals
(n=0). She was observed having good rapport with her students, which could be a possible explanation. However, Mrs. Jackson did have the lowest of the class grade average (M=75) of the participants selected for this phase of the present study. This may speak to the lack of consistent use of research-based practices in her classroom. Mrs. McDonald used a teacher-centered style with the regular use of three of the seven research-based practices which were identified in the present study. She had a mean class grade average of 92%; indicating the effective use of the strategies she does use. However, despite the emotional support and personal relationships she builds with hers students she had the highest class removals (n=6) of the four participants. This is a surprising finding since Mrs. McDonald’s lessons are engaging, and she uses research-based practices plus relationship building skills to increase positive class climate.

Mrs. Lawrence uses four of the seven identified research-based practices to engage student learners in her classroom. She had a high mean class grade average (M=94.80) and low class removals (n=1). This is indicative of effective teaching practices in the classroom. Mrs. Lawrence states she uses both teacher-centered and student-centered teaching styles in the classroom. She is the type of teacher who is always trying new things to improve student learning. Her low class removals are due to effective behavior management skills as well contextualized relevant lessons the students are interested in. Mrs. Lawrence also keeps her students actively involved in the lessons by constantly calling on them and having them do examples on the board or reading out loud.

Mr. Keyes uses a teacher-centered style in his classroom allowing students time to practice the skills he is teaching them about. He uses two of the seven research-based practices in his classroom to engage student learners. His mean class grade average is very high despite the fact that he only regularly uses two of the identified research based practices in his classroom
(M=132). An explanation for the class grade average over 100 is that he teaches a number of honors classes which are able to have percentages over 100. Mr. Keyes also engages the learners in his classroom in such a way that that he has low class removals (n=3). He does this by keeping his class moving with very little down time.

*What are teachers’ perceptions of the amount of support received from the principal?*

All four participants have similar ideas of what instructional supports looks like in his or her school building. All believe it is the principal’s primary responsibility to be sure that the teacher has what the teacher needs to teach the students in their classroom. Mrs. Jackson mentioned that she also believed the principals should be checking to be sure that teachers were teaching what they were supposed to be teaching, and that teachers have the opportunity for professional development.

Mrs. McDonald added that she felt she needed to help the principal be aware of what was happening inside the classroom so that he could provide her with the support she needs from him. She thought he should be providing her with feedback and programs that might help her in her classroom. Mrs. Lawrence just reiterated the idea that the principals should provide her with materials to help her teach. Finally, Mr. Keyes did not have any expectations from his principal. He felt his principal was doing everything he should do, so he hadn’t ever thought about the question before. After thinking about it, Mr. Keyes felt instructional support should come in the form of the principal supporting a teacher in disciplinary issues as well as just gaining classroom materials for the teacher.

**Summary**

Teacher effectiveness is paramount in this age of accountability. What teachers practice in their classrooms on a daily basis leading to student achievement should be scrutinized so that
methods of effective teaching can be replicated and used as an example to other teachers. The Mean Class Grade Average was the quantitative global measure of student achievement in the teacher’s class of the study and was used as a measure of the effectiveness of classroom practices. All four teacher participants in the present qualitative portion of the study had Mean Class Grade Averages of 75% or higher. Three of the four participants had a Mean Class Grade Average above 92%. This is indicative of average to above average student achievement on the whole.

A significant portion of data collected suggests the teachers are committed to student learning enough to spend time outside of his or her planning periods to be engaging in school related activities (i.e., planning and researching lesson and attending educational classes to increase his or her own knowledge); however, despite the time spent outside of the teachers’ planning periods, a lack of consistent use of research-based practices was found across all four participants. While the study was limited in design since not all research-based practices could be explored, seven common research-based practices that could be utilized in any core academic content area were investigated in each participant’s classroom. Nonetheless, the teachers lack consistent use of research-based practices did not affect the Mean Class Grade Average, which was identified as the main criterion for being an effective teacher.

The data also suggest that effective teachers handle misbehavior in the classroom behavior deciding to send students to the office for consequences. Teachers handle behavior problems by being proactive, setting clear expectations, and developing relationships with their students. Two of the four teachers had prior special education experience and they felt this helped them in the classroom dealing with any problems that occurred.
Finally, the teachers in the study all felt that they received the support needed from the building principal. The principal, in all of the teacher’s opinions, provided each of them with all necessary materials for his or her classrooms.
CHAPTER VI. DISCUSSION AND CONCLUSION

Introduction

The purpose of this mixed methods study was to first analyze quantitative data to identify if relationships between classroom climate variables and student achievement existed. Quantitative data were collected from Progress Book and discipline records from a Northwest Ohio suburban school district. The classroom climate variables examined included: (a) class size, (b) number of special education students, (c) number of class assignments given in a grading period, (d) number of office referrals given per teacher per course, (e) the class grade average, and the (f) the number of teacher postings on Progress Book.

Next, four teacher participants were chosen from the quantitative data as effective teachers. The data that were used to identify effective teachers in the present study included mean class grade average, mean number of postings to Progress Book, mean number of class removals, and mean class size. Teachers needed to be instructors of core academic areas to be included in the study. During the qualitative phase, the participants were observed and interviewed to ascertain the instructional strategies effective teachers use to engage student learners in their classrooms to increase student achievement and decrease office removals. The use of research-based practices was explored in this phase of the current study as well. In addition, the researcher also investigated the teachers’ perception of their administrators as instructional leaders.

In the present study the overall class grade average was used as the measure of student achievement. It was a global measure of student achievement in the teacher’s class, meaning that it was an average of all the students’ grade averages in the class averaged together. This global
measure of student achievement was ultimately a measure of the effectiveness of classroom practices by the teacher.

Chapter VI presents a discussion of the quantitative and qualitative findings. The findings are organized into sections based on the research questions and include (a) number of postings to Progress Book, (b) number of assignments given, (c) number and percent of students on an IEP, (d) class size, (e) research-based instructional practices, and (f) instructional support. Because the number of significant findings was greater in analysis of the course data than it was in the analysis of the teacher data, the discussions of the study’s quantitative findings is inspired primarily by the course data correlations. Limitations and recommendations for future research follow. Implications for practice and leadership and final thoughts conclude the chapter.

Discussion of Findings

Number of Postings on Progress Book

Making a posting to Progress Book is a practice used to increase communication between teachers and students. While throughout this document, the researcher has described this variable as homework, postings can entail much more; teachers can post class rules and expectations on the class home page, as well as class notes, web links, resources, and assignments. A statistically significant negative correlation was found in the course data analysis between Class Grade Average with Number of Postings on Progress Book. The negative correlation between student achievement and Number of Postings on Progress Book indicates the lower the number of postings to Progress Book, the higher the Class Grade Average, or vice versa. It is surprising that a negative correlation to student achievement would exist with a tool that was created with the advancement of student achievement in mind (Software-Answers, Inc., 2008). Perhaps a negative correlation was found because postings to Progress Book may have been considered to
be mostly homework. Studies have shown no positive effects between the amount of homework and student achievement in younger student populations (Cooper, 1989). Cooper (2007) goes on to explain a curvilinear relationship between homework and achievement. A small amount of homework may appear to have positive relationship with learning; but after too much homework is assigned, achievement may be flatten or decline.

Research question number two examined the differences in student achievement between groups of courses and teachers and groups of data analyzed. Within the course data significant differences were found in groups (high/low) based upon postings in Progress Book. A significant difference in student achievement existed between courses where there was a high use of Progress Book postings \( n=31 \) or more and a low use \( n=0-10 \) of Progress Book postings in a grading period. Consistent with the findings from Research Question One, the low group had significantly higher Class Grade Averages than the high group did. Again, this result is surprising for a tool existing to help teachers communicate with students to increase student achievement; it would seem the opposite should be true. Frequent communication between parents, teachers and students is essential to success in school and increased school achievement (Seitsinger et al., 2008). Perhaps the significance of this finding in the present study comes not from the number of Progress Book postings as it does the type of material posted (e.g., notes, homework assignments, required materials, optional materials, other resources) or how the teacher is using Progress Book in his or her daily teaching. As a teacher myself, I might suggest keeping the lines of communication open with students about Progress Book; make sure they know how to access it and use it on a regular basis. If postings are being made to help students on a regular basis, make sure they know how get to them, and what the purpose of the postings are.
Within the qualitative data analyzed for the effective teachers identified, all four participants discussed using Progress Book frequently; all teachers went to classes outside of school time to be trained on how to learn how to use different applications of Progress Book, and specifically talked about how they post materials for their students to use. The mean number of postings to Progress Book was five or below for all teachers in the qualitative portion; however, the teachers all spoke as if they posted notes regularly, almost daily, for their students. The lower mean may indicate teachers make more postings in some classes than in others. Despite this, all participants had high class grade averages.

*Number of Assignments Given*

The negative correlation between student achievement and Number of Assignments Given indicates the lower the number of assignments given the higher the Class Grade Average, or the more assignments given the lower the Class Grade Average becomes. This finding differed from past research. Cooper, Lindsay, Nye, and Greathouse (1998) found weak positive correlations between the amount of homework assigned and student achievement. Several other studies also found positive relationships between homework and student achievement (Cooper, 1989, Cooper, 2007). While the present study addresses all assignments on the whole and not just homework assignments, caution should be made in making the generalization between all assignments given and homework assignments because the present study could not differentiate homework assignments from the total number of assignments given.

Research question number two examined the differences in student achievement between groups of courses and teachers and groups of data analyzed. Within the course data significant differences were found in groups (high/low) based upon Number of Assignments. Also
consistent with the findings from Research Question One, a significant difference in student achievement existed between courses where there was a high Number of Assignments given \( (n = \text{more than 60}) \) and a low Number of Assignments given \( (n = 1-15) \) during a nine-week period. The courses where there was a lower number of assignments given had a significantly higher Class Grade Average than those courses which gave a high number of assignments.

Limited existing research was found on the quantity of classroom assignments being linked to student achievement; however literature linked to the quantity of homework assignments and student achievement was found (Cooper et al., 1998, Cooper, 2007). In fact, this topic has become quite controversial as of late (Vatterott, 2009). The culture of our society has changed putting pressures on students to become involved in extracurricular activities, have part-time jobs, or take care of family members, leaving students struggling to find time to complete the tremendous amount of homework assigned on a nightly basis. The pressures teachers face to become accountable and have all students pass high stakes tests put pressures on them to assign large amounts of homework (Sallee & Rigler, 2008). A debate exists about the value of homework in our society, the amount of homework students should be given, and the resources they should have in order to complete the homework under equal circumstances (Vatterott, 2009). Teachers should question their homework policies to find the purpose of why they assign homework; homework used for formative assessment and not for punitive reasons are a few guidelines to keep in mind (Haas, 2008). No matter what homework practices are implemented by teachers, the focus should be on academic success for all students.

While the number of assignments given was not used in choosing the effective teachers in the current study, looking back at the quantitative data, I discovered that all four teacher participants from the qualitative phase had a range of assignments between 30 and 82 during the
nine-week grading period. Despite the high number of assignments given, the teachers still were able to have High Grade Class Averages, which contradicts the finding from the quantitative phase that the lower the number of assignments given the higher the Class Grade Average. This suggests the instructional techniques used or the research-based strategies being utilized within the classroom may be effective in increasing student achievement. It also suggests that factors other than Class Grade Average can determine the effectiveness of a teacher, or that a combination of factors contributes to teacher effectiveness.

Number and Percent of Students on IEPs

A large achievement gap exists between students with disabilities and those without in scores on high stakes tests such as the Ohio Achievement Test (ODE, 2005). In the present study a negative correlation between student achievement and the Number of Students on an IEP indicates the lower the Number of Students on IEPs in the class the higher the Class Grade Average, or vice versa. Within the teacher data analyzed, a statistically significant negative correlation existed between student achievement and Percent of Students on an IEP. This finding indicates that the higher the percent of students on an IEP in a class the lower the Class Grade Average. The correlation between student achievement and Percent of students on an IEP in the teacher data is similar to the ideas included as in the Number of Students on an IEP in the course data.

Studies show that students with disabilities showed positive achievement gains in inclusion classes that were co-taught by general education and special education teachers (Klingner, Vaughn, Hughes, Schumm, & Elbaum, 1998; Myklebust, 2006). Students in the studied district may benefit if more inclusion classes were to take the place of self-contained special education classes; but this does not necessarily mean the IEP student gains’ will increase
the overall Class Grade Average. Of course, the spectrum of special education services and placements should always be considered when making decisions for the welfare of the student.

The participants interviewed did not discuss special education students frequently. Mrs. Lawrence did not have any inclusion classes, but she did mention having special education experience. Mr. Keyes had some inclusion classes, but his high Mean Class Grade Average indicates he may have had more honors classes than inclusion classes. Mrs. McDonald and Mrs. Jackson also did not have any inclusion classes. The fact that they did not have any inclusion classes does not necessarily mean the teachers did not have any students on IEPs in their classes.

These data should be analyzed with caution. The school district studied here schedules general education students on general education teachers’ class lists while special education students are scheduled in special education teachers’ class lists when students are enrolled in inclusion classes. So, while in reality an inclusion class may have 29 students in actual seats, with both general and special education students and two teachers present, in Progress Book data the classes appear to be separated. In the present study there was no way to distinguish which inclusion teachers were connected to which general education teachers to calculate the real class sizes. When asking the guidance department why the Progress Book grade book was set up this way, I was told that it was done for various reasons.

Sometimes, the special education teacher and the general education teacher have no previous experience working together and the two teachers need to find a mutual respect for what each other’s role in the classroom is. There is sometimes resistance from both parties. One reason given to me for the separate grade books is that the general education teacher can give the general education students their grades without compromising them with the accommodations given to the special education students. In this case, the general education is teacher still grading
assignments and tests; and the general education teacher’s name is on the student grade card even though the special education teacher is providing accommodations and team teaching in the classroom. In this situation, the special educator may or may not be given equal status within the classroom.

Santoli, Sachs, and Romey (2008) conducted a survey of both special and general educators regarding the implementation of inclusion and found that while 98% of the respondents would be willing to make accommodations for students, 77% of the respondents did not believe students with disabilities should be educated in the general education classroom. Since the inclusion of students with disabilities in statewide assessments is mandated by No Child Left Behind (Council for Exceptional Children, 2003), it is imperative school leadership collaborates with teachers to find ways to overcome the barriers inclusion presents to all teachers.

The first step toward understanding inclusion is understanding teacher attitudes and beliefs towards inclusion and students with disabilities (DeSimone & Parmar, 2006). Negative teacher beliefs are one of the major barriers to inclusion (Kochhar, West, & Taymans, 2000). Teacher collaboration and collegiality is the key to the success of inclusion programs. Teacher collaboration should be fostered through administrators allowing for joint planning and conference time (DeSimone & Parmar, 2006; Harbort et al., 2007; Kloo & Zigmond, 2008; Magiera & Zigmond, 2005).

Another reason for the separate grade book for is that the teacher needs to be given “credit” for teaching classes every period. With all teachers needing to have highly qualified teacher status (HQT) under the No Child Left Behind Act, new special education teachers just out of college may not be meeting the requirements of content area qualifications (Manning,
Bullock, & Gable, 2009). Co-teaching is an effective procedure to meeting NCLB guidelines by pairing a teacher who is highly qualified in an academic content area with a teacher who is knowledgeable in accommodating for the special needs of students with disabilities (Murawski & Dieker, 2004).

It is important to note that while the studied district does practice inclusion so special education students are placed in the least restrictive environment possible, this does not mean all special education students are educated in inclusion classes. A general education classroom, staffed with only one general education teacher, can have several students on an IEP in the class. An inclusion class is set up with two teachers: one general educator, and one special education teacher. The inclusion classroom is designed for the teachers to co-teach and help struggling students be successful in the least restrictive environment (Santoli, et al., 2008). There are special education students who have less severe disabilities who can adapt to the general education classroom more successfully and the classroom teacher can provide the needed accommodations without a second teacher in the classroom. On the other hand, self-contained special education classrooms are necessary for those students with severe disabilities who need more attention from the special educator. Again, the spectrum of special education services available to students needs to be considered carefully when making decisions for the student’s welfare, being sure being sure the IEP team determines the best placement for the student.

Regardless of the data analysis, effective teachers may be the key to turning the negative correlation between the number of special education students in a classroom and student achievement around. An effective teacher may have just the right instructional strategies and interventions to differentiate instruction for the special education student so that he or she experiences academic success in the classroom. Additionally, the effective teacher may also
make the effort to establish caring relationships and rapport with students to increase student achievement (Hoy et al., 1998; Sufka & George, 1998). Students encouraged to do well by their teachers may be committed to the overall educational process (Carbonaro, 2005). Furthermore, positive relationships with teachers are associated with higher grades (Benner et al., 2008; Stone & Han, 2006). Adolescents with positive perceptions of climate have higher achievement in school.

All teachers in the qualitative portion of the study appeared to have positive relationships with their students. However, Mrs. McDonald stood out as an example of a teacher who seemed to demonstrate the ethic of care in her classroom. Mrs. McDonald’s lessons and words echoed Beck’s (1994) purpose of caring: to help individual’s grow and actualize themselves. She truly cares about her student’s development and fosters a mutual respect in her classroom. Mayeroff (1995) describes a caring teacher as one who provides exposure to relevant experiences and encouragement; Mrs. McDonald fits this description with the Contextualized Instruction she fits into her lesson plans and the constant verbal praise and feedback for her students. Using the the research-based practice of contextualized instruction paired with caring with students on an IEP will make instruction have a higher chance of being successful. Students will develop a sense of belongingness as well connect content to relevant experiences. These two positive instructional techniques will enhance students with special needs learning environments.

Research question number two examined the differences in student achievement between groups of courses and teachers and groups of data analyzed. Within the course and teacher data significant differences were found in groups (high/low) based upon Percent of Students on an IEP. Courses with the lower Percent of Students on an IEP had significantly higher Class Grade Average than courses with a high percent of IEP students. The same was found to be true within
the teacher data set. While the statistically significant findings were weak, it may point to a lack of needed interventions and accommodations that can and should be provided for the student on an IEP as well a poor working relationship between the general education teacher and the special teacher. Because not all instruction delivered will reach all students, a plan should be in place to intervene for those students who are struggling (Elliot, 2007). Regardless of the reasons why the intervention is needed, teachers must focus on providing the interventions and getting the students to where they need to be and achieving at the levels they can be with effective instructional techniques. Co-teachers in an inclusion setting must both be active instructors in the classroom to provide students with disabilities success with the general curriculum (Magiera & Zigmond, 2005). Additionally, co-planning and collaboration between the general education and special education teachers is an absolute necessity for inclusion and co-teaching to be successful (DeSimone & Parmar, 2006; Harbort, Gunter, Hull, Brown, Venn, Wiley, et al., 2007; Magiera & Zigmond, 2005; Walther & Thomas, 1997).

Class Size

Consistent with existing research (Glass & Smith, 1979), a positive correlation between student achievement and class size was found to exist. More recently, the Tennessee STAR project found student achievement and improved student behavior to be linked to decreased class size (Finn & Achilles, 1999). The STAR project defined a small class size as 13-17 students and a regular class as 22-25 students. However, Hanushek (1999) concluded class size alone does not lead to an increase in student achievement (see Hattie, 2005 for a comprehensive list of factors influencing student achievement).

The four participants in qualitative portion of the present study had mean class sizes between 14 and 20 students, which falls within the regular class size as defined by Finn and
Achilles (1999). The smallest class observed was Mrs. Lawrence’s advanced placement class, which had eight students in it. All of the Class Grade Averages for the participants in the qualitative portion of the study showed at least average student achievement (75% or higher) while in those regular size classes. This finding is important because other factors which influence student achievement such as socioeconomic status or family structure (Hattie, 2005), were not tested. Mrs. Lawrence’s advanced placement classes typically had higher Class Grade Averages than the college preparation classes; however, Mrs. Lawrence did discuss the work ethic of her advanced placement students being poor, although I do not believe this is a product of class size but rather motivation on the part of the student.

While the research is conflicting on whether class size alone can influence student achievement (Glass & Smith, 1979; Hanushek, 1999), the current study did find that class size has a positive relationship with student achievement.

Research-Based Instructional Practices

Research question number three examined qualitative data to investigate how effective teachers engaged student learners to facilitate learning and decrease office removals. The four identified effective teachers participating in this portion of the study had diverse learning environments for their students. The core academic content area was different in each class as was the student body, but the teacher delivery of the content was the main focus of the observations and interviews. I was looking for the instructional techniques effective teachers used to engage students in learning and decrease office removals.

Since I was looking at instructional techniques effective teachers display it is difficult to ascertain if student learning took place. The Class Grade Average was used as the global measure of student achievement within each teacher’s class. Since all teachers chosen for
participation in the study had a mean Class Grade Average of 75 or higher, the researcher assumed students have *learned* the material the teacher presented in the class during the grading period it was presented.

Student engagement refers to “active, goal-directed, flexible, constructive, persistent, focused interactions within the social and physical environments” (Furrer & Skinner, 2003, p. 149). School engagement is important because it improves performance, as well as predicts a student’s long term academic achievement (Skinner, Zimmer-Gembeck, & Connel, 1998). In all four of the observed classrooms, the students appeared to be engaged in the lesson or activity. The students had *persistent, focused interactions* with the subject matter which were *goal-directed* since an activity or assignment culminated the lesson or activity; there was *flexibility* if the teacher changed course if need be because of student questions or fire drills, etc.

Each teacher had his or her own ideas of what research-based practices to use in his or her classrooms. Providing feedback was the research-based practice used most often by the participants (see Table 8 in Chapter V). All of the participants provided feedback to their students in one form or another. The teachers were observed giving oral praise to their students throughout the lesson. Good feedback should have both a motivational and cognitive factor; the motivational factor gives the students a feeling of control of their own learning and the cognitive factor gives students information about where they are in their own learning (Brookhart, 2008). Teachers also discussed informing students of their progress on an on-going basis. Research supports this practice (Cotton, 2000; Marzano, et al., 2001). Some teachers did this by handing back their assignments daily or going over grades with his or her students. Progress Book also helps students keep track of their grades on a regular basis.
Teachers in the current study did not practice formative assessment, at least given what was observed. All of the feedback the teachers provided to their students was summative assessment; teachers provided grades on completed assignments or test grades to students regularly. Formative assessment is used differently; it informs instruction (Harlen, 2007). Formative assessment was not seen in any of the classrooms observed or discussed with any of the participants. Formative assessment is a process that should be implemented so that teachers can provide feedback to improve their teaching and the learning of students in their classrooms (Gorlewski, 2008). While grades can be given with formative assessment, the primary intent of the formative assessment process is to provide feedback or motivation to students.

The next most commonly used research-based practice among the four participants was connections to prior learning. Making connections to prior learning helps to engage student learners. Students learn best if they can use what they already know to build new knowledge (Mason et al., 2005). If students are asked to learn new facts in isolation, it is much more difficult than if they can relate to new ideas to ideas they already know and try to draw relationships between the two (Araz & Sungur, 2007). Three of the four teacher participants made connections to prior learning when presenting new material to their students in the classroom. Mrs. McDonald began the class I observed with a reminder about what they had done previously in class to review the concepts they had been working on. Mrs. Lawrence stated that when she introduces a lesson she will sometimes tie it to a previous lesson. I observed her trying to tap into student’s prior knowledge by trying to have them remember when they learned something similar to the skill she was introducing. She would refer back to previous chapters, and tell her students that “this really isn’t anything new”, and constantly try and have her students recall previous knowledge. Mrs. Lawrence knows how important connections to prior
learning are. Mr. Keyes, like Mrs. Lawrence, often tells his students that they aren’t really doing anything new, just giving it a new name. Perhaps this is because in math, skills build off one another. This is in direct relation to existing literature that states learning is cumulative developmental; students will learn best if they can use what they already know to build new knowledge (Mason, et al., 2005).

The next most commonly used research-based practices were Contextualized Instruction and Graphic Organizers. They were both used by two of the four participants. Contextualized Instruction is using practices which ensure meaningful application and real-life experiences for students (Mason et al., 2005). Learning is most effective when the brain puts knowledge into meaningful memories and experiences. Mrs. McDonald and Mrs. Lawrence are very skillful in this particular instructional technique.

Mrs. McDonald feels that there are so many opportunities to connect material to student’s lives; and she tries to do so with passion. For example, Mrs. McDonald used a poetry unit on imagery to teach students a way to de-stress at the end of the year; she used *The Miracle Worker* to teach her students about disability awareness, and *Romeo and Juliet* to teach her students about dating. Within her grammar lessons, Mrs. McDonald used real-life examples in sentences and paragraphs to catch student interest as well. Mrs. McDonald’s students have even commented to her that they see beyond a test in her classroom, that they see it is something they are going to apply in real life and that makes them more serious about their assignments.

Mrs. Lawrence invests a large amount of time researching applicable real-life examples for students to learn from. This is an investment that Mrs. Lawrence feels is worth the effort. I observed her presenting the math skill to her students and then tying that skill to several careers so that they can see why it is relevant to them.
Student centered-learning, while not necessarily a research-based practice, is parallel to the idea of contextualized instruction; teachers tap into students’ interests to make learning meaningful. Only one of the participants used a student-centered teaching style. Mrs. Lawrence was not observed using this particular style, but she discussed her role as a facilitator of student learning, a key determination of the student-centered approach to instruction (Giles et al., 2006; Opdenakker & VanDamme, 2006). Mrs. Lawrence stated that students aren’t used to open-ended learning; she says that students are used to being told instead of discovering.

Data-Driven Instruction and Differentiation were not observed being used by any of the teachers. Data-driven instruction is the effective use of data to inform decisions in the classroom (Cotton, 2003). It is possible that the teachers use data to inform instructional decisions on a daily basis; and this would not have necessarily been something that would have been observed unless data was posted in the classroom. Effective teachers use data such as grades, performance assessments, and discipline reports to make plans for their classrooms, whether it is for units of study or daily lesson plans. Having data available on student performance for analysis is critical for reaching student achievement goals (McLeod, 2005).

Differentiation was also not observed being used by the teachers participating in the current study. Students of varying functioning levels can benefit from differentiated instruction. Tomlinson (1995) states that differentiated instruction is not just about making modifications to existing assignments. Mr. Keyes provides challenge problems for his students as way to differentiate. Differentiated instruction is more complex than that; although it can be accomplished in three areas: (a) content, what the student needs to know; (b) process, how the student is going to learn; and (c) product, how the student is going to demonstrate what he or she has learned (Knowles, 2009). Walker (2001) states educators practicing true differentiated
instruction believe each student has a right to grow as a learner “from whatever point at which he
is in his development and provide ample opportunities for the student to move forward” (p. 60).

Mrs. Jackson stated she believed differentiated instruction would be difficult to do; and it is.
Differentiation takes effort on the part of the teacher; providing varied teaching strategies and
approaches to students in one class takes planning and vision to maximize student learning.
Differentiated instruction also relies on frequent informal student assessment and recognizing the
student’s strengths and weaknesses in the classroom (Tomlinson, 1999).

The fact that these research-based practices are missing from the participants’ classrooms
indicates a need for professional development opportunities within the district for training on
these two topics if it is desired that teachers be using data-driven instruction and differentiated
instruction in their classrooms on a regular basis.

**Instructional Support**

Research question number four examined qualitative data to investigate teachers’
perceptions of the amount of support received from the principal. All four participants felt they
received adequate instructional support from the principal. The principal’s interaction with
teacher’s and the school environment has an indirect influence on student achievement
(Vanderhaar, Munoz, & Rodosky, 2007; Wiztiers et al., 2003).

Effective school leadership includes the principal as an instructional leader. An
instructional leader gives feedback and praise to teachers, provides professional development
opportunities, and supports collaboration (Blasé & Blasé, 2000). Principals also need to set clear
behavioral standards for the school and make sure that consistent behavior policies are applied to
all students throughout the school (Cotton, 2003). When asked specifics about instructional
support, the participants all stated the principals should supply them with materials needed to
help them teach their students. This particular statement differs from the research. While materials may be necessary, support comes in different forms that are not always tangible.

In addition to the supply of materials, the participants discussed the following ideas. Mrs. Jackson expected the principal to know the content standards so that he was aware of what the teachers should be teaching in their classrooms (Kaplan & Owings, 2001). She also expected him to be aware of professional development opportunities and supporting teachers in that capacity. Mrs. Jackson also would like to see more consistency in discipline. She would also like to have some more input into disciplinary consequences with the assistant principals since they take care of disciplinary issues at the high school level (Richards, 2005). Mrs. McDonald also agreed that the principal should be responsible for bringing her professional development opportunities that would help her or her students (DuFour & Berkey, 1995). However, she did feel that it was also partly her responsibility to make sure he knew what kinds of programming would benefit her and her students the most so he knew what to look for. So, the principal does have some characteristics of an instructional leader; he provides professional development opportunities and makes sure that consistent behavioral consequences are applied to all students in the school.

The contribution Mrs. Lawrence made to the topic on instructional support was that she was confident in her teaching abilities and that she gets everything she asks for from her principal. She went on to say that she expects consistency in behavioral consequences for students (see also Richards, 2005). Mr. Keyes also expects to be supported by the principal in all disciplinary issues. If he sends a student out of the room, he doesn’t want the student to just get sent back to class after a slap on the hand; and that hasn’t happened, so he feels supported by the principal in that regard.
Interestingly, the teachers in the current study all had low class removals \((n = 6\) or lower). The teachers all admit to trying many behavior management techniques within the classroom and being proactive to prevent behavior problems from happening. Principals may tend to be supportive of those teachers who make an effort to work with students within the classroom as opposed to always sending the problems to the office. For example, if Mrs. Jackson has only one removal from her class in a nine-week period, the principal may know that this student must have really done something to deserve the removal and be given a consistent consequence, unlike the teacher who removes students daily from every period for no reason at all without implementing classroom consequences to try and remedy the problem.

While discussions of the securing of classroom materials were not found in the literature, all four participants did name this as a common area of instructional support found in his or her school. The participants also stated the principals provided opportunities for professional development and tried to implement consistent disciplinary consequences for all students. This finding is consistent with the literature (Blasé & Blasé, 2003; Cotton, 2003). Consistent consequences given by principals, along with communicating high expectations to students help to increase student achievement (Liethwood & Jantzi, 2000; Nettles & Harrington, 2007).

Limitations

This study was limited to 121 educators and the 615 courses they taught from the junior high and high school levels at one school district in Ohio. Generalizability is limited to educators working with this age group in this particular setting; caution should be used when applying the results elsewhere (Creswell, 2007; Maxwell, 2005).

Additionally, four teachers were interviewed for the qualitative phase of the study. Observations and interviews were each 30-40 minutes in length. The study could have been
made stronger with more prolonged engagement with the participants (Maykut & Morehouse, 1994). Time constraints to complete the observations and interviews before the close of school made this impossible and limited the study. Additionally, while the interviews were scripted, some of the participants were easier to interview than others; some of the questions led to other questions that I did not have the opportunity to ask all the participants. The views of students from each of the teacher’s classes would have strengthened the present study by validating the teachers’ responses and by giving another perspective of what an effective teacher does to engage student learners.

Recommendations for Future Research

Knowledge about what defines an effective teacher is necessary because the teacher is one of the most important factors influencing student achievement (Cochran-Smith, 2002; Danielson, 2006; Kaplan & Owings, 2002; Lasley et al., 2006). However, the literature agrees that effectiveness is a difficult characteristic to define (Lewis, 2006; Stronge, 2007). The findings of the present study open up the possibility of exploring teacher effectiveness in different settings and from different perspectives in the hopes of defining the ever elusive effective teacher. The data from this study can be used to involve teachers, administrators, and parents into conversations about what teachers need to be doing in classrooms to engage student learners to increase student achievement.

Possible future research might include replicating the present study, but including all grade levels instead of just the junior high and high school grade levels. Including all grade levels will attract a larger population size and give a larger representation of all variables for K-12 teachers. Additional teachers might be included in future qualitative research to have added input about the use of research-based practices and the instructional techniques used in the
classroom. The time spent with the teachers also should be increased in any future qualitative research; increased observations in teacher’s classrooms observing daily instructional practices would be a beneficial addition to the current research. The inclusion of students to the qualitative research would be an important addition to any future study. The perspective the students could lend to the study would be invaluable.

Recreating the present study with individual factors included may give a better view of teacher effectiveness. Individual student factors such as variation in family background characteristics and community characteristics may influence student performance in many ways (Ehrenberg et al., 2001; Rice, 1999). Analyzing classroom teachers’ effectiveness with individual student factors, school factors, and classroom factors intermixing may yield interesting results.

Because the current study examined many variables broadly, it may serve well to examine the variables separately; but analyze them deeply. For instance, a qualitative study examining research-based practices in the classroom, or a quantitative study examining attitudes towards number of special education students in the classroom or inclusion practices could be completed. A study surveying teachers regarding their use of Progress Book or their attitudes towards Progress Book; or a survey regarding teacher classroom practices are possible narrow topics to be studied.

Implications for Practices and Leadership

Postings to Progress Book

A teacher can list class rules, major projects, interesting links, classroom resources, and of course class assignments and daily homework on Progress Book. Progress Book has an important home-school communication aspect which can be accessed by parents, students, and
administrators. Teachers can post information they want parents and students to have access to as well as enter grades on-line in a web-based atmosphere. Parents can check grades for their children on Progress Book as often as they wish to be sure they have no missing assignments and are keeping up in their classes. It takes no more than a few minutes to do each week.

Progress Book use by students has vast accountability implications. While parents can check student grades, students can take the responsibility into their own hands as well. They can check for their own missing assignments, and complete them well before they don’t have time to get credit for the assignment anymore. Students can know exactly what will be on their report card even before it comes in the mail. The posting to Progress Book function helps with accountability as well. Students can use the grade book to check grades, but they can also go into the calendar and check the teacher’s postings and class resources to help them stay organized and ahead in class if they choose to do so.

Administrator use and monitoring of Progress Book is one of the most important and key issues to interpret from the present study. Again, accountability is paramount. Accountability needs to be in place to be sure that teachers are posting grades as they are supposed to be; if Progress Book is a home-school communication tool, teachers need to view it as such and input grades throughout the entire grading period and not just at the end of grading period when grades are due. If grades are not input properly, this may violate the grading policy and lead students to believe that they are getting a passing grade, and then they suddenly fail at the end of the grading period when the teacher did enter grades.

The focus of the present study was the Class Grade Average which was able to be obtained from Progress Book. The studied district has used this average to gauge student
achievement and/or teacher effectiveness in classrooms across the district. There are advantages and disadvantages to using the Class Grade Average as this measure.

A disadvantage of using Class Grade Average as an indicator of teacher effectiveness includes the fact that this measure alone cannot be used as the sole means for determining effectiveness or ineffectiveness. For example, in the present study if Class Grade Average would used as the sole indicator of effectiveness, many effective teachers may be in danger of being consequenced for not doing their jobs. As it was, several other quantitative factors were used to determine effectiveness of the teacher participants, and those factors still did not tell the whole story about the teaching practices they use in their classrooms. The qualitative portion of the present study indicated the practices happening inside the classroom. Going into the classrooms and observing teacher instructional practices and watching his or her interactions with students is critical, helping to explain why one quantitative measure is not enough to ascertain teacher effectiveness.

An administrator collecting Class Grade Average should also be informally gathering other forms of data to establish effectiveness the district would like the teachers displaying in their classrooms. For instance, if teachers should be using certain research-based practices in the classroom, the district should be collecting data on what practices they expect teachers to be using and establish a baseline for improvement. This data can then be used in tandem with the Class Grade Average.

Another disadvantage includes the fact that not all of the administrators in the studied district use the Class Grade Average consistently. Some administrators use the Class Grade Average to identify low performing teachers and implement interventions and action plans (D. Poggialli, personal communication, 8/17/2009; S. Matheny, personal communication,
While there is no evidence of a top-down directive from district administration to building administrators to collect data about Class Grade Average from Progress Book and flag teachers with low averages, it may not have an impact on low-performing classrooms. After the data were collected and analyzed, while some of the administrators in the studied district reported they collected the data, some of the administrators said that they reported this data back to district administration and some did not (D. Poggialli, personal communication, 8/17/2009; S. Matheny, personal communication, 8/17/2009).

An advantage to the use of the Class Grade Average as an identifier of effectiveness or ineffectiveness is that administrators can begin the appropriate conversations with teachers. When the principal sees a low Class Grade Average he or she can conference with the teacher in and discuss why the average is low. The principal may get to the root of the problem and be able to provide available interventions and resources to the classroom teacher to increase the Class Grade Average. Likewise, when a principal sees a high Class Grade Average, the principal may be able to use the high performing teacher as a mentor to struggling teachers if effective classroom practices have been verified (Gordon, Kane, & Staiger, 2006).

Recommendations to the manufacturer of Progress Book include that they implement a monitoring system at the school level so that the school could check the activity level of parents and students. The school district checks the usage rate at the end of the school year for each building which reports the percentage of parents and students who have signed on to Progress Books at least one time. A report that gave an activity level would be more useful for teachers and administrators.

The monitoring piece would be useful to administrators because they would be able to have data on hand about the number of students and parents logging on to Progress Book to
check grades, increase grades, communicate with teachers, etc. When and if parents or students came to them to complain, they could pull out and the data and show them. The monitoring system would be useful to teachers so that they would know if it was useful for them to put up the links and resources for their students; if the monitoring system was in place they could have data which told them “x” amount of students signed on to Progress Book in Mrs. Jackson’s Biology class this month to access her postings.

In that same vein, it would be beneficial for the manufacturer to have some way within their monitoring piece to distinguish between types of postings. Because teachers can post so many types of things on Progress Book, it is beneficial to know, especially as a researcher and an administrator, what kind of posting the teacher has on his or her Progress Book page. If a teacher has 81 postings, are they all homework assignments? Classroom rules? Web links? Class notes? Resources for studying for the next test? The current study showed there was a negative correlative between the number of postings to Progress Book and Class Grade Average; however, the correlation was weak with little practical application, especially when the kinds of postings could not be distinguished easily.

Administrators should also know that more postings to Progress Book are not necessarily better. Administrators should beware that ineffective teachers may possibly hide behind high numbers of Progress Book postings in the hope that they may be overlooked for a classroom walkthrough or observation. My recommendation to administrators is to be aware of what the Progress Book posting number means and what, if any, decisions are made with it. I would also recommend that administrators be aware of what teachers are being asked to do regarding Progress Book technology.
Finally, my recommendation for the teachers using Progress Book is that they need to ultimately know what kind of postings their students will use. This comes full circle back to the ethic of care. If a teacher primarily has students without computers in her class, he or she should be finding a way to be sure they can have access to the postings she provides to them if they are more than just daily assignments. Daily assignments can be posted on the board in the classroom, so students can have access to them in more than one way, students do not have to get them on Progress Book. The other postings teachers choose to provide on Progress Book are usually computer based, so teachers could provide time in the library if needed for students with no computer access. Teachers can also create interest in their homepage and postings and do lessons on how to access the materials and links for students who do not know how to access them. Teachers need to know their students and know what kinds of materials to post that will gain their students interest that will be most worth their effort to put onto Progress Book.

Classroom Factors and School Factors on Student Achievement

Classroom factors such as employing teachers meeting high quality teaching requirements (Kaplan & Owings, 2001), teachers who employ the ethic of care in their classrooms (Beck, 1994), the teaching style teachers teach with (Opdenakker & VanDamme, 2006), and the research-based practices teachers use all impact student achievement. School factors also impact student achievement. Class size (Ehrenberg, et al., 2001), school climate (Benner et al., 2008), classroom climate (Church et al., 2001), and school leadership (Nettles & Herrington, 2007) influence student achievement either directly or indirectly throughout a student’s school career.

With the authorization of NCLB, high stakes test scores gauge if schools are meeting Annual Yearly Progress (AYP) towards state proficiency goals. Teachers and administrators face
tremendous pressures to demonstrate student proficiency gains. However, caution should be used when implementing policies which isolate individual teachers for contributions to student learning (Valli, Croninger, & Walters, 2007). Holding teachers accountable is imperative for student learning to take place, but questions remain on the best way to do so (Ballard & Bates, 2008). Where NCLB focuses on a teacher’s paper credentials as an indicator of quality, a shift should be made to focus on teacher effectiveness in the classroom as a measure of HQT (Gordon et al., 2006).

The present study should be shared with district administrators for discussion and inclusion in upcoming policy changes. Professional learning communities have had a positive effect on students and evidence suggests that student academic achievement is greater in schools where teachers have a higher collective responsibility for learning (Little, 1999). The possibility of forming professional learning communities in the studied district would have tremendous impact on the teachers and the students they teach. The development of professional learning communities would help the studied district begin to look at the challenges of inclusion, as well as implementing more research-based strategies in the classroom. Collaboration through professional learning communities has been found to increase student performance as teachers explore new teaching practices (Raspberry & Mahajan, 2008). Teachers should also familiarize themselves with the current research on student achievement and NCLB, as well as research-based strategies in their content area. Teachers should also seek out and participate in professional development to strengthen their weaknesses within the classroom (Ballard & Bates, 2008).

School and classroom climate is a large dynamic of going to school for students. If students do not want to be at school, they are not going to want to learn anything. Goodenow and
Grady (1993) found that a sense of belonging was significantly related to academic motivation and student achievement. It is the school’s and teacher’s responsibility to increase the ethic of care and make the ethic of care and belongingness an integral part of the school and classroom climate (Beck, 1994). This needs to be done in the teacher’s everyday routines and the lessons that the teachers implements; by using research-based practices such as contextualized instruction and connections to prior learning students will feel welcomed in the classroom and want to be there.

Two of the four teachers in the qualitative portion of the study were observed using these strategies more often than the other two. Their use of the strategies kept the pace of the class moving and the students appeared to be engaged and interested in the material. Teaching style can impact the climate as well as student achievement in the classroom (Daniels & Perry, 2003). The teaching style observed being used by all four teacher participants in the qualitative portion of the study was a teacher-centered style; while not centering on the student, this style must work best for these teachers as the student engagement appeared to be high. A teacher needs to get to know students, establish relationships, and teach them in ways they prefer to learn which will create a positive classroom climate (Buyse et al., 2008). Of the four teachers in the qualitative portion of the study, the ethic of care was evident in two of the classrooms; that is not to say the other two teachers did not care for their students, because they surely did, but two of the teachers demonstrated the ethic of care more so than the others.

Implementing programming to increase student achievement requires excellent school leadership. As an instructional leader, the principal is responsible for informing teachers about research-based strategies, new technologies, and other tools to promote effective instruction within the classroom. The perception of the leadership in the studied schools from the teacher
participants follows this description, as all participants in the qualitative phase, spoke very highly of their principals. Leadership is situational and depends upon the context in which it occurs as well as many factors including the traits of the school leader (Hersey, Blanchard, & Johnson, 2001). However, the lack of instructional leadership according to Marks and Printy’s (2008) definition where an active collaboration is present between the principal and teachers regarding curriculum, and instruction and assessment points to the need for the administration to begin to seek out new ideas for school improvement.

School leaders need to remember with their every decision that their leadership practices are significantly related to student achievement (Vanderhaar at al., 2007). The Ohio School Report Cards released for the 2008-2009 school year indicate the high school of the studied district was rated “effective”, an increase from continuous improvement the year before; and the junior highs were rated “academic watch”, a decline from the previous year; and “continuous improvement”, stayed the same from the previous year (ODE, 2009). The leadership practices of the school can impact student achievement along with teacher, school, and student factors.

Effective Instruction

The research indicates many practices are available for teachers to add to their repertoire of classroom practices that result in efficient and motivated learning, yet in many classrooms, these practices are not routinely used, leading to disengaged students and low student achievement (Bost & Riccomini, 2006). Instructional decisions impact student achievement and ultimately influence long-term outcomes for students such as graduation rates. The use of research-based practices as a foundation for effective instructional decisions is the key to success. Teachers should learn about and then implement research-based strategies rather than using their own judgment about what works and what does not (Bost & Riccomini, 2006).
In the present study, the teachers were not observed using a large amount of research-based practices. While the observations were limited, interviews confirmed researched-based practices were inconsistently used across the classrooms. Some of the teachers used some of the targeted practices more than others; Mrs. Lawrence and Mrs. McDonald were observed and spoke of using more of the targeted research-based practices than Mrs. Jackson and Mr. Keyes did. This indicates a need in the studied district for professional development on what research-based practices are and how to implement them in the classroom at the middle school and secondary levels.

While it is difficult to ascertain if all students in a classroom are learning, multiple methods and strategies are available for teachers to use to engage students (Vondracek, 2006). Teachers need to realize that students will learn more when they are actively engaged during instruction. Active engagement can increase in several ways: (a) effective design and delivery of lessons, (b) selecting interesting and culturally relevant materials, (c) offering opportunities for student response, and (d) reinforcing student participation (Mastropien & Scruggs, 2004). In the present study, the students in the observed classrooms appeared to be engaged in the lessons the teachers presented to them, the students were not disruptive and were attentive. In three of the four observed classrooms the teacher met all four of the above stipulations for active student engagement given by Mastropien and Scruggs (2004) indicating an understanding of the concept. However, more in-service on the concept would be beneficial.

At the high school level especially, less teacher-directed approaches should be used and replaced with more interactive, personalized approaches designed to motivate and engage students (Shulte, Slate, & Onweugbuzie, 2008). Care should also be taken to address appropriate learning styles of the diverse student population. In the current study, all four observed teachers
used a teacher-centered approach in the classroom. Mrs. Lawrence was the only teacher who discussed using a student-centered approach by being a facilitator of student learning during learning activities in the classroom. The importance of caring and student-centered approaches in the classroom encompasses the definition of the effective teacher. Caring, fairness, patience, and understanding were all traits used by participants in a study conducted by Shulte et al. (2008) to describe effective teachers. While subject matter knowledge is important, the affective domain should be given consideration when looking at teacher effectiveness (Cotton, 2000). The studied district may want to consider sharing information with teachers about the benefits of student-centered approaches in the classroom.

*Professional Development*

Professional development must share some common elements for educators to use effectively in their classrooms (Gusky & Yoon, 2009). Professional development (PD) should have a link to student achievement gains in the classroom, but too often teachers go to PD and do not apply what they have learned. Of all the studies Guskey and Yoon (2009) analyzed workshops and summer institutes showed a positive relationship between professional development and improvements in student learning. Workshops may focus on researched-based practices and provide teachers with opportunities to adapt practices to their own unique learning environments.

Other findings from Guskey and Yoon (2009) include time and follow-up. Contact hours are essential to show a positive effect from sustained professional development opportunities. Likewise, follow-up is equally important. Structured and sustained follow-up after the main professional development activity is crucial to positive improvements in student learning.
The activities and content of professional development is often debated (Guskey & Yoon, 2009). Research-based practices are abundant in the literature and should dominate the classroom, however many teachers do not recognize what they are. Professional development in this area should be a priority for the studied school district. Data driven instruction, an area the participants in the present study were not observed using, is especially crucial given the age of accountability schools and teachers face on a daily basis (McLeod, 2005; Pierson, 2009). Professional development in the area of differentiated instruction, a second practice the present study’s participants were not observed using, is another high priority need given the diverse learners teachers instruct in their classrooms every day (Rose & Meyer, 2002).

Professional development in the areas of inclusion and co-teaching would benefit teachers in the studied district working in inclusion settings (Magiera & Zigmond, 2005). Ongoing and specific training is necessary to promote successful inclusion classroom atmospheres (Fox & Ysseldyke, 1997). The general education teachers may feel ill-prepared to work with the student with disabilities in their classroom, and have the desire for more training and collaboration time with the special education teacher (Santoli, et al., 2008). Inconsistent training for co-teachers in the studied district may lead to continued challenges towards inclusion. Collaboration between teachers can only help the students; however, the time barriers to collaboration must be overcome.

Final Thoughts

An effective teacher cannot be defined by one quantitative measure alone. This is not a surprising statement, but one the current study has made clearer. If the studied district evaluated the teachers on Class Grade Average alone, some effective teachers could be in danger of receiving poor evaluations or facing contract nonrenewal, and some ineffective teachers may be
marked as effective without employing research-based practices that are best for student achievement in the long run. It is safe to conclude that many characteristics together make an effective teacher, measured both quantitatively and qualitatively. Leaders need to take this into account when evaluating a teacher’s effectiveness.

In the present study Class Grade Average was used as the global measure of student achievement and therefore the measure of teacher effectiveness. However, flaws exist in using this as a measure of teacher effectiveness. While the teachers in the present study were identified as effective through this measure, some were more effective than others based on the qualitative data analyzed. The Mean Class Grade Average does not take into account individual student differences such as student attendance or chronic behavior problems. Items such as those could bring an entire Class Grade Average down and flag a teacher as ineffective even if they the teacher is practicing research-based strategies and proper behavior management techniques in the classroom. Leadership within the school and district should use caution when implementing policies which will use one quantitative piece of data that has far reaching implications within the classroom. The data do not have to be just the Class Grade Average. They could include OAT and OGT scores as well. Measuring quantitative data may be a factor in teacher evaluation for a few reasons: (a) changes in student scores may be the most tangible evidence of student learning or teacher accomplishment, and (b) it may be the most objective piece of data available for teacher evaluation decision (Feldman, 2004). However, too much emphasis on one piece of data without looking at the whole picture could be detrimental to both the student and the teacher.

If the concern is increasing student achievement, focus needs to be on what is happening inside the classroom, not just on a percentage or a test score. Of course, the scores ultimately
come from what happens in the classroom, but there are also many variables that affect what the scores turn out to be; the effectiveness of teaching practices being one of the most important ones. Teacher training on the research-based practices the studied district, or any district, would like the teachers to implement in their classrooms is a necessity. Optional seminars and workshops are nice, even if they are provided for a stipend; but when professional development is not provided to all teachers consistently, the practices are not implemented consistently. When the practices are not implemented in the classroom consistently, student achievement may not occur. William (2007) states that the most important difference between the most and least effective classrooms is the teacher, but the most important variable is not what they know, but what they do; so if we are serious about increasing student achievement, we must focus on what teachers are doing in their classrooms. This will occur in consistent district-wide professional development programming.

The single most important influence on student learning is the quality of the teacher; yet many districts have not defined what they mean by effective teaching (Danielson, 2006). In order to define effective teaching practices, school leaders should analyze many forms of existing data to identify what is working in classrooms. Effective teaching is best measured by multiple measures; not merely quantitative Class Grade Average or state assessments scores, but student sense of belongingness, teacher ability to match teaching style to learning style, as well as knowing and applying research-based practices. All of these characteristics together help to put the puzzle of an effective teacher together in the classroom. Identifying teachers who consistently exceed expectations with their students could be a start. Instructional leaders can then identify the strategies and techniques used by those teachers, and use them as exemplars within the school building or district.
While the current study did not address every aspect of teacher effectiveness, important characteristics parallel with the literature on effective teachers did emerge: teacher preparation, classroom management, and the way a teacher plans, teaches, and monitors student progress, as well as develops relationships with their students (Stronge, 2007). School leaders need to keep in mind that effective teachers are not made to order and are as individual as the students they teach.
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April 2009

Dear Mr. Pahl,

I am a doctoral student in the Leadership Studies Program at Bowling Green State University conducting research for my dissertation. The topic of my research is *The Relationship between Classroom Climate Variables and Student Achievement*. I am requesting your permission to conduct this mixed methods research study within your district. The study is conducted for educational purposes and to complete my doctoral dissertation. The study should also help to gain a better understanding of how teachers and the school can help increase student achievement.

If you agree to this study, I will be extracting data from Progress Book and Discipline Tracker. Additionally, I will be interviewing four teachers from the junior high and high school. The interview will last approximately 45 minutes and will be scheduled to avoid the loss of instructional time. I will also be observing the participants during the course of the study. The information gained during the study will be utilized for the purpose of writing my doctoral dissertation and ultimately to be used by educational leaders in developing professional development programs designed to increase student achievement. I have outlined the terms of the study below:

1. The information obtained during the project will be used to write a doctoral dissertation and to assist education practitioners in developing professional development designed to increase student achievement.
2. Real names will not be used during the data collection process or in the writing of the dissertation. Every attempt will be made to disguise the identity of the participants.
3. Data collection from Progress Book will begin in April 2009 and end in May 2009.
4. In the interview phase of the study, interviews will be audio taped to ease data collection. The entire data collection process will be completed approximately August 15, 2009 at which time all tapes will be destroyed.
5. The teachers will have the opportunity to read their individual transcribed interviews to ensure accuracy. Transcripts will also be destroyed at the conclusion of the study—approximately October 28, 2009.
6. Participation in the study is voluntary and participants are free to withdraw from the study at anytime.
7. Direct quotations from the interviews and observations may be used in the dissertation; however real names will not be used.
8. I will provide you with a copy of the completed dissertation.
9. Signing and returning this letter will indicate your agreement to voluntarily participate in this study. You will receive a copy of this signed consent.
Risks

The risk associated with this study is that specific statements made by you or other participants may be able to be traced back to their source. To safeguard against that possibility, I will take the following measures: First, all personally identifiable demographic data will be eliminated from the final report. Second, only fictitious names will be used. I will remove any information that might disclose your identity, except references made to you as superintendent. Third, you will have the opportunity to review information you have provided, or references that have been made to you, for the purpose of checking disclosure. You retain the right to have any or all data removed from the final report.

If you have any questions with respect to the research participants, their rights, or any other aspect of the data collection/dissertation process, please feel free to contact me, my advisor, Dr. Patrick Pauken, or the Human Subjects Review Board at Bowling Green State University. Contact information is provided below.

I agree to participate in this study ____________________________, __________________________
Superintendent’s Signature                      Date

____________________________________           ____________________________
Researcher Signature                                               Advisor Signature

If you have any questions, please contact the researcher, Suzanna Leone, at:

1007 Taft St.       2130 Hayes Ave.
Port Clinton, OH 43452     Barker Alternative School
419-734-0044 (H)             Sandusky, OH 44870
419-341-0182 (C)             419-627-8124
leonesz@aol.com             sleone@scs-k12.net

or Dr. Patrick Pauken, Division of Educational Administration and Leadership Studies at Bowling Green State University, at

510 Education Building
Bowling Green State University
Bowling Green, OH 43403-0250
419-372-7377
paukenp@bgnet.bgsu.edu
or the chairperson of the Human Subjects Review Board at Bowling Green State University at:

201 South Hall
Bowling Green State University
Bowling Green, OH 43403-0250
419-372-7716
hsrb@bgnet.bgsu.edu
APPENDIX B. LETTER TO PRINCIPAL

April 2009

Dear Colleague,

I am a doctoral student in the Leadership Studies Program at Bowling Green State University conducting research for my dissertation. The topic of my research is The Relationship between Classroom Climate Variables and Student Achievement. I am requesting your permission to conduct this case study within your school. The study is conducted for educational purposes and to complete my doctoral dissertation. The study should also help to gain a better understanding of how teachers and the school can help increase student achievement.

If you agree to this study, I will be interviewing one (Middle School) or two (High School) teachers from your school. The interviews will last approximately 45 minutes and will be scheduled to avoid the loss of instructional time. I will also be observing the participants during the course of the study, which will occur during the fourth quarter of the 2008-2009 school year. The information gained during the study will be utilized for the purpose of writing my doctoral dissertation and ultimately to be used by educational leaders in developing professional development programs designed to increase student achievement. I have outlined the terms of the study below:

1. The information obtained during the project will be used to write a doctoral dissertation and to assist education practitioners in developing professional development designed to increase student achievement.
2. Real names will not be used during the data collection process or in the writing of the dissertation. Every attempt will be made to disguise the identity of the participants.
3. In the interview phase of the study, interviews will be audio taped to ease data collection. The entire data collection process will be completed approximately August 15, 2009 at which time all tapes will be destroyed.
4. The teachers will have the opportunity to read their individual transcribed interviews to ensure accuracy. Transcripts will also be destroyed at the conclusion of the study-approximately October 28, 2009.
5. Participation in the study is voluntary. You and the other participants are free to withdraw from the study at anytime.
6. Direct quotations from the interviews and observations may be used in the dissertation; however real names will not be used.
7. I will provide you with a copy of the completed dissertation.
8. Signing and returning this letter will indicate your agreement to voluntarily participate in this study. You will receive a copy of this signed consent.

Risks

The risk associated with this study is that specific statements made by you or other participants may be able to be traced back to their source. To safeguard against that possibility, I will take the
following measures: First, all personally identifiable demographic data will be eliminated from the final report. Second, only fictitious names will be used. I will remove any information that might disclose your identity, except references made to you as principal. Third, you will have the opportunity to review information you have provided, or references that have been made to you, for the purpose of checking disclosure. You retain the right to have any or all data removed from the final report.

If you have any questions with respect to the research participants, their rights, or any other aspect of the data collection/dissertation process, please feel free to contact me, my advisor, Dr. Patrick Pauken, or the Human Subjects Review Board at Bowling Green State University. Contact information is provided below.

I agree to participate in this study ____________________________, ______________

Principal Signature                           Date

____________________________________           ____________________________

Researcher Signature                                               Advisor Signature

If you have any questions, please contact the researcher, Suzanna Leone, at:

1007 Taft St.       2130 Hayes Ave.
Port Clinton, OH 43452       Barker Alternative School
419-734-0044 (H)       Sandusky, OH 44870
419-341-0182 (C)       419-627-8124
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or Dr. Patrick Pauken, Division of Educational Administration and Leadership Studies at Bowling Green State University, at

510 Education Building
Bowling Green State University
Bowling Green, OH 43403-0250
419-372-7377
paukenp@bgnet.bgsu.edu

or the chairperson of the Human Subjects Review Board at Bowling Green State University at:

201 South Hall
Bowling Green State University
Bowling Green, OH 43403-0250
419-372-7716
hsrb@bgnet.bgsu.edu
APPENDIX C. LETTER TO TEACHER-PARTICIPANT

April 2009

Dear Colleague,

I am a doctoral student in the Leadership Studies Program at Bowling Green State University conducting research for my dissertation. The topic of my research is *The Relationship between Classroom Climate Variables and Student Achievement*. I am inviting you to participate in this study. The purpose of the study is for educational purposes and to complete my doctoral dissertation. The study should also help to gain a better understanding of how teachers and the school can help increase student achievement.

If you agree to this study, I will interview you one time. The interview will last approximately 45 minutes and will be scheduled to avoid the loss of instructional time. Additionally, I will also be conducting informal observations during the course of the study. During the observations, I will be looking at the instructional practices you employ in your classroom. The study will commence and be completed during the fourth quarter of the 2008-2009 academic school year. The information gained during the study will be utilized for the purpose of writing my doctoral dissertation and ultimately to be used by educational leaders in developing professional development programs designed to increase student achievement. Your decision to participate or refrain from participating will not in any way affect your teaching position in any way. For your convenience, I have outlined the terms of the study below:

1. The information obtained during the project will be used to write a doctoral dissertation and to assist education practitioners in developing professional development designed to increase student achievement.
2. Real names will not be used during the data collection process or in the writing of the dissertation. Every attempt will be made to disguise the identity of the participants.
3. Interviews will be audio taped to ease data collection. The entire data collection process will be completed approximately August 15, 2009 at which time all tapes will be destroyed.
4. The teachers will have the opportunity to read their individual transcribed interviews to ensure accuracy. Transcripts will also be destroyed at the conclusion of the study—approximately October 28, 2009.
5. Participation in the study is voluntary. You are free to withdraw from the study at anytime.
6. Direct quotations from the interviews and observations may be used in the dissertation; however real names will not be used.
7. If requested, I will provide you with a copy of the completed dissertation.
8. Signing and returning this letter will indicate your willingness to voluntarily participate in this study. You will receive a copy of this signed consent agreement.
Risks

The risk associated with this study is that specific statements made by you or other participants may be able to be traced back to their source. To safeguard against that possibility, I will take the following measures: First, all personally identifiable demographic data will be eliminated from the final report. Second, only fictitious names will be used. I will remove any information that might disclose your identity, except references made to you as teacher. Third, you will have the opportunity to review information you have provided, or references that have been made to you, for the purpose of checking disclosure. You retain the right to have any or all data removed from the final report.

If you have any questions with respect to the research participants, their rights, or any other aspect of the data collection/dissertation process, please feel free to contact me, my advisor, Dr. Patrick Pauken, or the Human Subjects Review Board at Bowling Green State University. Contact information is provided below.

I agree to participate in this study ____________________________, _____________
Teacher Signature                            Date

____________________________________           __________________________
Researcher Signature                                               Advisor Signature

If you have any questions, please contact the researcher, Suzanna Leone, at:

1007 Taft St.                       2130 Hayes Ave.
Port Clinton, OH 43452             Barker Alternative School
419-734-0044 (H)                   Sandusky, OH 44870
419-341-0182 (C)                   419-627-8124
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or Dr. Patrick Pauken, Division of Educational Administration and Leadership Studies at Bowling Green State University, at

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Bowling Green State University  
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419-372-7716  
hsrb@bgnet.bgsu.edu
APPENDIX D

SEMI-STRUCTURED INTERVIEW QUESTIONS

1.) Describe a typical day in your ____________ class. What does it look like? What are the students doing? What are you doing?

2.) What kind of behavior problems, if any, do you typically see in a day? In a month? What do you believe causes the behavior problems?

3.) What do you do as a teacher to deal with behavior problems?

4.) What kind of student achievement problems, if any, do you see in class?

5.) What kind of achievement gains do you expect to see from student during the course of a school year?

6.) What specific teaching behaviors do you demonstrate in your classroom to help students reach learning goals in your class?

7.) What research-based practices do you use regularly in your classroom?

8.) What are your expectations from the principal as an instructional leader?

9.) What support do you receive from the principal as an instructional leader?

10.) What are your expectations from the principal to help you as a teacher with discipline?

11.) What support do you receive from the principal to help you with discipline?

12.) Tell me about your use of Progress Book. Do you like it? Dislike it? Why?
APPENDIX E

OBSERVATION CHECKLIST

Describe classroom

What is the teacher doing?

What are the students doing?

Teacher is facilitating or directing lesson? How can I tell?

Is teacher connecting lesson to prior learning? If so, how?

Is teacher making lesson relevant to the students somehow? If so, how?

Is teacher providing feedback to students about what they are doing now or what they have done before?

Is there evidence of data being used to drive instruction anywhere in the classroom? If so, what?

Is the teacher using the data to drive instruction during the observation? If so, how?

Is there evidence of differentiation in the lesson? If so, how?

Is the teacher using graphic organizers to present information to students? If so, how?
### APPENDIX F

**DATA ANALYSIS CODES AND DEFINITIONS**

**Codes**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRB</td>
<td>Progress Book</td>
</tr>
<tr>
<td>DIF</td>
<td>Differentiated Instruction</td>
</tr>
<tr>
<td>CPL</td>
<td>Connections to Prior Learning</td>
</tr>
<tr>
<td>CXI</td>
<td>Contextualized Learning</td>
</tr>
<tr>
<td>PFB</td>
<td>Providing Feedback</td>
</tr>
<tr>
<td>CLN</td>
<td>Cooperative Learning</td>
</tr>
<tr>
<td>DSC</td>
<td>Discussion</td>
</tr>
<tr>
<td>GRA</td>
<td>Graphic Organizers</td>
</tr>
<tr>
<td>PRA</td>
<td>Practice</td>
</tr>
<tr>
<td>DDI</td>
<td>Data Driven Instruction</td>
</tr>
<tr>
<td>UOT</td>
<td>Use of Technology</td>
</tr>
<tr>
<td>EXP</td>
<td>Expectations</td>
</tr>
<tr>
<td>STC</td>
<td>Student-Centered Teaching Style</td>
</tr>
<tr>
<td>TEC</td>
<td>Teacher-Centered Teaching Style</td>
</tr>
<tr>
<td>INS+</td>
<td>Instructional Support Positive</td>
</tr>
<tr>
<td>INS-</td>
<td>Instructional Support Negative</td>
</tr>
<tr>
<td>TTP</td>
<td>Time to Prepare</td>
</tr>
<tr>
<td>CSZ</td>
<td>Class Size</td>
</tr>
<tr>
<td>BPB</td>
<td>Behavior Problems</td>
</tr>
<tr>
<td>CP-</td>
<td>cell phone</td>
</tr>
</tbody>
</table>
TP- talking out
DR- disrespect
SL- sleeping
DIS- disrespect
US- unsafe practices
BOR- bored
PAR- parents

SAP  Student Achievement Problems
LOB- lack of basics
LOWS- lack of writing skills
NWE- No Work Ethic

SAG  Student Achievement Gains
GRO  Growth
SCT  Short Cycle Tests

ADMDIS  Administration Discipline
DIS  Discipline
PROX  - Proximity Control

PRO  Proactive
ENGINS  Engaging Instruction
SENG  Student Engagement
ATM  Atmosphere
CLI+  Climate- positive
CLI-  Climate- negative
EMS  Emotional Support  
ACC  Accommodations  

_Code definitions_

PRB  Progress Book- Use of progress Book as a resource for students and parents
DIF  Differentiated Instruction- refers to using different instructional techniques for diverse learners in the classroom.
CPL  Connections to Prior Learning- The teacher uses some kind of connection to prior learning to something they have learned previously in the classroom- a statement, a reminder to the student that they have learned the skill or concept before.
CXL  Contextualized Learning- The teacher makes the lesson/learning relevant to the student, makes a real life connection for the student. Real world examples or problems that are meaningful to students personally.
PFB  Providing Feedback- The teacher gives the student feedback about what they are doing; giving the student verbal praise or gives them their grades on papers handed back, somehow letting students know how they have done on activities or lessons.
CLN  Cooperative Learning- refers to the use of cooperative learning- pairing the students, peer tutoring, groups work, etc. as a learning tool in class
DSC  Discussion- refers to teacher’s use of group discussion as a learning tool.
GRA  Graphic Organizers- Refers to the use of graphic organizers as a learning tool.
DDI  Data Driven Instruction- Teacher uses data to lead instructional decisions in the classroom.
UOT Use of Technology- Refers to the teachers use of the smartboard, airliner, and other technology devices as part of lessons to engage students.

EXP Expectations- Refers to the teacher having established expectations at the beginning of the class/school year to lessen behavioral problems.

STC Student Centered Teaching Style- The teacher is using a student centered teaching style; teacher demonstrates active student involvement in subject matter.

TEC Teacher Centered Teaching Style- The teacher is using a teacher centered teaching style; teacher demonstrates direct behaviors to increase student competence and direct student learning.

INS+ Instructional Support Positive- refers to the positive instructional support given by the school administrator to the teacher.

INS- Instructional Support Negative- Refers to the instructional support given by the school administrator that was perceived to be negative, non-existent in nature, or not what the teacher would have like for it to be

TTP Time to Prepare- Refers to the amount of time the teacher took to prepare lessons or materials for students.

CSZ Class Size- Refers to the size of the class the teacher has.

BPB Behavior Problems- Refers to the behavior problems seen in the classroom.

CP- cell phone

TO- talking out

DR- disrespect

SL- sleeping

DIS- disrespect
US-unsafe practices

SAP  Student Achievement Problems- refers to the problems the teacher defines in student achievement in their class.

LOB  Lack of Basics- refers to the student’s lack of basics; simple math facts and reading skills.

LOWS  Lack of writing skills- Refers to the student’s lack of writing skills

NEW  No Work Ethic- refers to the student’s lack of work ethic as noted by the teacher.

SAG  Student Achievement Gains- refers to what the teacher hopes to see students achieve academically throughout the year.

GRO  Growth- refers to the actual growth that teachers wanted to see in their students.

SCT  Short cycle tests- refers to the benchmark tests that students are given three to four times each school year to evaluate their knowledge.

ADMDIS  Administration Discipline- Refers to the support given to the teacher by the administrator in dealing with disciplinary issues.

DIS  Discipline- refers to the teacher’s response to behavioral problems within the classroom.

PROX- refers to the use of proximity control as a disciplinary technique in stopping unwanted classroom behaviors.

PRO  Proactive- refers to the teacher being proactive rather than reactive; anticipating a problem before it happens and intervening rather than responding to the problem after it occurs.

ENGINS  Engaging Instruction- Refers to the teacher having an engaging instructional activity or lesson planned.
SENG  Student Engagement- Refers to the students appearing to be engaged in the activity or lesson occurring in the classroom.

ATM  Atmosphere- Refers to the surroundings of the classroom, the physical description of the classroom.

CLI+  Climate-positive- Refers to the actions of the teacher which contribute to a positive feeling within the classroom.

CLI-  Climate-negative- Refers to the actions of the teacher which contribute to a negative feeling within the classroom.

EMS  Emotional Support- refers to the teacher providing more than academic support to the students, teachers are emotionally supportive to the students in the class, allowing the student-teacher relationship to grow.

ACC  Accommodations- Refers to the accommodations given to the students to increase academic success, ex. shorter assignments, more time, etc.

TEF  Teacher Effort- refers to the actions of the teacher that go above and beyond the job description so students increase achievement (i.e., type in student’s names into data bases, recording lessons into PB so they can listen to them when absent, etc.).